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AIMS AND SCOPE
Transition is the widely accepted term for the thoroughgoing political, institutional, organizational, social, and technological changes and innovations as well as economy-wide and sector changes in societies, countries and businesses to establish and enhance a sustainable economic environment.

Managing Global Transitions is a social sciences’ interdisciplinary research journal. The aim of this journal is to publish research articles which analyse all aspects of transitions and changes in societies, economies, cultures, networks, organizations, teams, and individuals, and the processes that are most effective in managing large scale transitions from dominant structures to more evolutionary, developmental forms, in a global environment. The journal seeks to offer researchers and professionals the opportunity to discuss the most demanding issues regarding managing of those transitions to establish and enhance a sustainable economic environment.

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Service Innovation by Industrial Cluster Formation and Export Promotion

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Service innovation drives economic growth and structural change by stimulating the development of new sectors and productivity improvements in existing sectors. Resource based sectors are the main contributors to South Africa’s North West province’s economic output. This paper illustrates how such a region can use industrial cluster formation and focused export promotion as a strategy to enhance service innovation. Four service clusters were identified within the above mentioned province through structural path analysis and power of pull methods. An export market selection model is applied to the identified service industrial clusters to reveal realistic export opportunities associated with each cluster. Finally, trade multipliers are used to show the spill-over benefits given an increase in the clusters’ exports. Policymakers can use these results to inform actions that may assist in the development of these services clusters to strengthen the province’s competitive advantage and diversify its output.

Key Words: Service innovation, industrial clusters, export promotion, trade multipliers, TRADE-DSM®

JEL Classification: R110, F140
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Introduction

Growth and competitiveness are key goals for most economies and are driven by mainly the manufacturing and service sectors, technological innovation and service innovation. The services sector is progressively vital for growth in the global economy (Nordå and Kim 2013). The success and competitiveness of manufacturing is now more dependent on innovative services such as design, marketing, logistics and product-related
after sales services. Service firms are therefore providing complimentary services for manufactured goods and services related to distribution channels (Chesbrough 2011). According to European Commission (2012) service innovation is characterised by ‘significantly improved or novel service concepts (either in the manufacturing or services sector), innovation services processes, establishment or improvements in service infrastructure, customer processing, business models, commercialisation (sales, marketing and delivery), service productivity and hybrid forms of innovation serving several user groups in different ways simultaneously’. Service innovation transforms distribution channels, business processes, and models to transform the entire value chain and significantly enhance the customer experience (Chesbrough 2011).

This study focuses on the North West province (NWP) of South Africa. The economy of this province is currently driven mainly by the mining sector, which accounts for almost 36% of the economic output of the province (see http://www.ihsglobalinsight.co.za). 84% of South Africa’s platinum output, 46% of the granite output and 25% of the gold output originated from the NWP (Credit Guarantee 2010). The NWP also produces significant quantities of cement, coal, copper, diamonds, dimension stone, fluor spar limestone, manganese, nickel, phosphate, slate, uranium and vanadium (Credit Guarantee 2010). Macroeconomic instability and the decline of manufacturing sector are consequences of dependence on resource-based sectors (Eitzen 2012). The recent decline in manufacturing as a result of over-reliance on resource-based sectors undermines economic growth and development (Kingstone 2012).

In this study, the promotion of service industrial clusters is proposed as a strategy to enhance service innovation and export success. Secondly, this paper aims to identify realistic export opportunities (REOS) for the service industrial clusters according to the TRADE (Trade and Development) – Decision Support Model (TRADE-DSM®) to enhance these clusters’ probability of export success and further enhance the province’s competitiveness. Thirdly, trade multipliers are calculated to elaborate on the inter-linkages that exist between the services cluster sectors.

The following section will discuss the background on industrial cluster formation and the role it plays in driving growth, with a special focus on the services sector. The third section then explains the research methods. While the results of the identified service clusters, the REOS of the TRADE-DSM® for services and the trade multipliers are presented in the fourth section. The conclusions and recommendations are presented in the fifth section.

Managing Global Transitions
Role of Service Industrial Clusters and Exports in Growth

SERVICE INDUSTRIAL CLUSTERS AS A SOURCE OF GROWTH AND INNOVATION

The interdependence between firms in an industrial cluster can incubate innovation. Porter (1989) highlighted that long-term sustainable advantages for a firm or a region can be derived from innovation. Industrial cluster enhance innovation and productivity growth through improved technical and technological capabilities (Porter 1998). Systematic linear processes, adaptation and self-organisation of behaviour by entrepreneurs result in the formation of systems of innovation in clusters (Feldman, Francis, and Bercovits 2005).

Competition among firms is no longer driven by price only, but also by innovation, technology and the development of innovative products. Technology, according to Smillie (1991, 9) ‘is the science and art of getting things done through the application of skills and knowledge’. Technology improves the types of tools available for executing tasks, the knowledge skills and routines that are vested in people (Lall 1992). The use of machinery demonstrates the physical use of technology (Lall 1992). Knowledge creation in a cluster is facilitated by the presence of multiple suppliers and institutions (Porter 2000). Cluster formation enhances the technical and technological capabilities of small firms (Porter 2000).

Service innovation strengthens an economy’s industrial base and stimulates innovation in other industries thereby creating an enabling environment for the formation of new economic and industrial sectors (Chesbrough 2011). Cross-sector fertilisation is possible with the existence of service industrial clusters as they enable structural change and innovation (Bishop and Gripaios 2007). Cooperation among cluster firms from different sectors or industries results in effective value chains that are characterised by innovation, knowledge transfer and new product development (Tallman et al. 2004; Hansen and Birkinshaw 2007). Service innovation offers opportunities to advance the competitive position of regions with an industrial base that is not positioned at a technological frontier such as the NWP (European Commission 2012).

INTERNATIONALISATION THROUGH EXPORTING

In an environment of increased global integration and competition small and medium-sized enterprises (SMEs) need to innovate, and to internationalise to remain competitive (Van Laere and Heene 2003). Internationalisation and industrial cluster formation were identified as ways to
capitalise on the challenges and opportunities presented by globalisation, especially for firms in developing countries (Auwah 2009).

New markets can be served from existing manufacturing bases without having to establish production plants in other markets through exporting (Czinkota and Ronkainen 2007; Doole and Lowe 2004). The competitiveness of firms that rely on the domestic market can be threatened by shifts in consumer preferences, new competitors or economic downturn. These variations lead to decreased sales volumes, profits and growth prospects (Leonidou et al. 2007). Internationalisation reduces over dependence on domestic markets and business risks associated with dependence on one market. This is achieved by taking advantage of the differences in market share growth, the different stages and the intensities in different countries’ business and product cycles (Albaum, Strandskov, and Duerr 2004; Trimeche 2002; Czinkota 2002). This study uses the results of a scientific export market selection model, the TRADE-DSM© for services to devise appropriate export strategies for each services clusters for the NWP combination.

Methods

The current paper follows and applies the same method used, to identify service industrial clusters in the NWP, from a previous study. Details of these methodologies including SPA, POP and the DSM methods have been described and published in detail elsewhere (Pisa 2014; Cuyvers and Viviers 2012). Below we summarise the main methods mentioned above and how they were applied to add rigour and coherence to the results presented in the current manuscript.

STRUCTURAL PATH ANALYSIS

Structural path analysis was conducted on a provincial social accounting matrix (SAM) for the NWP, using Sim SIP Sam, a Microsoft Excel macro which utilises the MATLAB platform (Parra and Wodon 2009). SPA enables the observation of the flow of income by decomposing the transactions (inter-industry linkages) between the various sectors of the economy. To trace the inter-industry linkages between sectors, SPA simulates and traces the effects of an injection into each sector in the economy. Once this injection is made into a specific sector, the increases in that sectors consumption of inputs, the subsequent increases output and household incomes and spending can be traced. Inter-industry linkages within NWP were explored using the fixed origin analysis which implies that
only the direct multiplier effects from a fixed origin (sector) are traced in the economy. The indirect multiplier effects that feed back into the initial sector in which the injection was made are not analysed.

One of the main shortcomings of the SPA method is that it does to identify or rank the clusters in order of their importance in effecting multiplier effects in the rest of the economy. The power of pull (POP) method was also used to prioritise the number of clusters.

**POWER-OF-PULL**

To prioritise the number of clusters for the NWP the power of pull (POP) method was applied to the SPA results (Pisa 2014). Dietzenbacher (1992) proposed the method to calculate the power of pull. This method analyses eigenvectors of the major eigenvalues of an inter-industry transaction matrix. The eigenvector method captures the network perspective and the infinite regressive nature of inter-industry influences. Also, the eigenvector method assigns weights to inter-industry linkages in a systematic way to enable the determination of the importance of industry sectors. By applying the SPA and subsequently the POP method to a SAM for the NWP, industry sectors’ power of pull can be assessed and ranked to determine the most important service industrial clusters.

To further prioritise the identified clusters in terms of potential output and exports the results of the power of pull (POP) method can then further be combined with the results of the TRADE-DSM* for services. This model helps to identify the most REOS for a specific sector in a given country and can rank the export opportunities so that the relevant government decision makers can further focus their limited resources on sectors that have the greatest export potential.

**THE TRADE-DSM* FOR SERVICES TO IDENTIFY REOS**

The TRADE-DSM* for services uses available data for services in South Africa and aims to determine the REOS for South African services. The model follows a sequential filtering process with four filters that identify services and markets with the most REOS for export success (Grater et al. 2014). Cut-off values are determined (Grater and Viviers 2012) in Filters 1 to 3, and those countries and services that do not comply with the minimum requirements for that filter are eliminated from further analysis. The first filter evaluates political and commercial risk, as well as macroeconomic size and growth performance of each country in the world. Filter 2 incorporates trade data for services and evaluates
the size and growth of import demand for services in each country, in the short term and long term. This is done based on sub-sector data for services that are grouped according to the Extended Balance of Payments (eBOPS) classification system (United Nations 2002). Trade data for this paper was obtained from TradeMap for the period 2007 to 2011 (see http://www.trademap.org).

Filter 3 comprises filter 3.1 and 3.2. Filter 3.1 uses the import penetration method which is a measure of market openness (Economic and Social Commission for Asia and the Pacific 2009). This method measures the ratio between the imports of a specific service in a specific country, and the total demand for that service in the domestic market (which is calculated using domestic services produced plus all imports of that service minus all exports of that particular service). This calculation is used as a proxy for market concentration, or openness of the market for imports. The results from filter 2 are then also further analysed in filter 3.2, where the model calculates market accessibility for each service in each country. This is calculated using a method developed by Hoekman (1996) to quantify each country’s General Agreement on Trade in Services (GATS) commitments. This method quantifies commitments into an index for market access for each country. In filter, 4 services and markets are not eliminated but are categorised into a realistic export opportunity matrix. A more detailed explanation of the methodology is available in Grater and Viviers (2012).

**TRADE MULTIPLIERS**

As described in Tarp, Roland-Holst, and Rand (2002) and Parra and Wodon (2009), the starting point for calculating trade multipliers is a standard SAM where all accounts except the rest of the world are considered to be endogenous. From there, the corresponding matrix of expenditure shares (or A matrix) can be calculated with each cell in the resulting matrix representing the expenditure share of each sector in the SAM. Let $M$ be the multiplier matrix (see equation 1), that is,

$$
M = \begin{bmatrix}
I - A_{fa} & A_{ff} & A_{fd} \\
A_{da} & A_{df} & A_{dd}
\end{bmatrix},
$$

where $I$ is the identity matrix. Then it is possible to compute the import (equation 2) and export (equation 3) dependence multipliers as follows:
\[ M_M = \begin{bmatrix} A_r \alpha; A_r \gamma; A_r d \end{bmatrix} \]

\[ M_E = M \begin{bmatrix} A_d \alpha; A_f \gamma; A_d d \end{bmatrix} \]  

The columns of the import dependence multiplier matrix \( M_M \) capture the particular relationships between variables resulting from a uniform leakage from a local institution or province to the rest of the world and does not affect the witnessed design of expenditure on imports. It shows the resulting demand for imports prompted by a uniform increase in total exports. The weighted averages of the rows of matrix \( M \) are shown as columns in the export dependence multiplier matrix \( M_E \). The expenditure shares of the rest of the world are used as weights in the calculation and measure the change in the total income of each domestic account resulting from uniform flows of funds from the rest of the world, short of changing the composition. A complete view of the dependence multipliers regarding transfer, open-loop, and closed-loop effects, can be captured if the additive breakdown of the multiplier matrix \( M \) is used in equations (2) and (3) (Parra and Wodon 2009).

The next section discusses the results of the above analyses applied to the NWP data from the provincial SAM.

**Results**

**IDENTIFYING SERVICE INDUSTRIAL CLUSTERS**

The SPA and POP methods identified and ranked the inter-industry linkages of all the sectors in the NWP economy. Four service clusters were identified as the highest ranking (in terms of inter-industry linkages) and most influential in the NWP. The following section describes and depicts the identified clusters. The lines in the diagrams represent the intensity of inter-industry linkages between two sectors, with thicker lines representing high intensity and vice versa. The absence of a line between two sectors in a cluster implies that there are no direct transactions between the two sectors.

**COMMUNICATION CLUSTER**

The first service cluster to be identified was the communication cluster. Figure 1 illustrates the sectoral composition of the cluster. Six sectors make up the communication cluster namely; building and other construction; communication; electricity; real estate; trade and transport. The highest intensity of inter-industry linkages in the cluster lie
between the communication; building and other construction; real estate and trade sectors. The communication sector through information communication technologies (ICT) is vital for service innovation as it facilitates the flow of resources and enables firms to execute inter-firm transactions effectively (Lusch and Nambisan 2015; Barret et al. 2015). ICT and communication between partners in clusters is pivotal to co-creating new products, services and inter-firm processes (Barret et al. 2015; Lusch and Nambisan 2015).

**REAL ESTATE**

The real estate cluster comprises seven sectors as depicted in figure 2. The strongest inter-industry linkages are between the communication and real estate sectors. The real estate cluster in this study demonstrates characteristics of a logistics cluster also known as a logistics real estate cluster.

*Managing Global Transitions*
A logistics cluster is defined as a geographic concentration of distribution centres (Sheffi 2012). The main aim of agglomeration of distribution centres is to serve local customers concentrated in a specific geographic area (Prologis 2015). Alternatively, this agglomeration of distribution centres near transit infrastructure may be aimed at serving and or facilitating global trade (Prologis 2015). Resultantly, as demonstrated by the findings in this study the communication and trade sectors would receive the most benefit from an injection into the real estate sector, and not building and other construction, business services, or insurance.

**BUILDING AND OTHER CONSTRUCTION**

The building and other construction cluster was identified as the third possible services cluster in the NWP. Eight sectors make up this cluster (see figure 3). The communication and trade sectors exhibited the strongest inter-industry linkages with the building and other construction sector.

**TRADE CLUSTER**

The trade cluster comprises the highest number of sectors, fourteen sectors relative to the other identified clusters. This implies that this cluster can exert influence on the rest of the economy when the number of sectors directly influenced by an injection into the trade sector are considered. The trade cluster can be the catalyst of structural change and industrial modernisation in the NWP. The trade cluster has great potential to have high transformative power through service innovation as it com-
prizes different sectors and this can facilitate cross-sectoral fertilisation and new business models.

**Determining Reos of the Service Industrial Clusters**

Table 1 lists the four identified service industrial clusters for the NWP. The identified services clusters are ranked according to the POP scores. These represent a sector’s ability to influence other sectors through inter-industry linkages or transactions in the network. The SAM uses aggregated sector data, classified under Standard Industrial Classification (SIC). The TRADE-DSM® for services uses data for services classified according to the United Nation’s EBOPS system and Central Product Classifications (CPC) codes. To enable comparison of the data, conversion into the same classification was required. Table 1 shows the corresponding EBOPS and CPC classifications associated with the four identified clusters.

Table 2 shows the services clusters with REOS for the NWP. Two of the four clusters had REOS namely; communication and building and other construction clusters. REOS in the communication cluster exist in

---

**Table 1** Identified Industrial Clusters: Corresponding HS chapters, EBOPS and CPC

<table>
<thead>
<tr>
<th>Cluster</th>
<th>EBOPS codes</th>
<th>CPC codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>245–247</td>
<td>N/A</td>
</tr>
<tr>
<td>Real estate</td>
<td>N/A</td>
<td>821–822</td>
</tr>
<tr>
<td>Building and other construction</td>
<td>249–251</td>
<td>N/A</td>
</tr>
<tr>
<td>Trade</td>
<td>N/A</td>
<td>741–742, 748–749</td>
</tr>
</tbody>
</table>

*Managing Global Transitions*
Table 2: Identified Industrial Cluster Services with REOS

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>246</td>
<td>3.1 Postal and courier services</td>
<td>5</td>
<td>2,459,103.00</td>
</tr>
<tr>
<td></td>
<td>247</td>
<td>3.2 Telecommunication services</td>
<td>33</td>
<td>49,978,671.00</td>
</tr>
<tr>
<td>Real estate</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Building and other construction</td>
<td>250</td>
<td>4.1 Construction abroad</td>
<td>20</td>
<td>33,147,907.00</td>
</tr>
<tr>
<td></td>
<td>251</td>
<td>4.2 Construction in the compiling economy</td>
<td>24</td>
<td>32,843,182.00</td>
</tr>
<tr>
<td>Trade</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes: Column headings are as follows: (1) cluster, (2) EBOPS code, (3) services sector, (4) number of opportunities, (5) total imports 2011 (US$ thousands).

EBOPS codes 246 and 247 (postal and courier services and telecommunications services). The building and other construction cluster’s REOS were EBOPS 250 and 251 (construction in the compiling economy and construction abroad). These REOS have export opportunities to 20 and 24 countries, respectively. All other service clusters did not have REOS.

Table 3 presents the communication services cluster’s top REOS i.e. the potential export markets for the identified South African service clusters. The top four opportunities for the communications services cluster ranked according to the total import value in 2007 are Canada, Hong Kong, United Kingdom and United States of America.

The results can also be classified according to the market size and access determined in filters 2 and 3. Opportunities in the communication services cluster for South Africa in Hong Kong are classified in a large market with short and long term growth, indicating high market openness and high market access. Canada and the United Kingdom are classified in a large market with low market openness but high market access.

As mentioned above real estate and trade clusters were found to have no REOS. For the building and other construction cluster, Germany, Japan, and Russia had the highest imports of construction services in 2011, regarding import values. However, although Germany, Japan, and Russia are large markets for construction services, it has low market openness and market access. If the NWP’s communication cluster explores these export markets, strategic planning, and funding.

The NWP can, therefore, use these results to shape their export promotion strategies. The specific clusters can be targeted and specific strategies formulated for each of the potential markets. For example, the communi-
Table 3: Top Potential Export Markets per Service Cluster

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Hong Kong</td>
<td>246</td>
<td>3.1</td>
<td>1,285,843.00</td>
</tr>
<tr>
<td></td>
<td>Canada</td>
<td>246</td>
<td>3.1</td>
<td>796,316.00</td>
</tr>
<tr>
<td></td>
<td>United States of America</td>
<td>247</td>
<td>3.2</td>
<td>7,792,000.00</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>247</td>
<td>3.2</td>
<td>6,341,515.00</td>
</tr>
<tr>
<td>Real estate</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Building and other construction</td>
<td>Japan</td>
<td>250</td>
<td>4.1</td>
<td>7,702,323.00</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td>250</td>
<td>4.1</td>
<td>6,612,868.00</td>
</tr>
<tr>
<td></td>
<td>Japan</td>
<td>251</td>
<td>4.2</td>
<td>7,702,323.00</td>
</tr>
<tr>
<td></td>
<td>Russian Federation</td>
<td>251</td>
<td>4.2</td>
<td>5,315,750.00</td>
</tr>
<tr>
<td>Trade</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes: Column headings are as follows: (1) cluster, (2) country, (3) EBOPS code, (4) services sector, (5) total imports 2011 (US$ thousands).

cation sector shows great potential in Hong Kong, which is a market that is large and growing in the long term. These services-country combinations also have high penetrability and high market access, and therefore, should be accompanied by very offensive export promotion strategies. Another example is an opportunity for building and construction in Japan, which falls in large markets, have high market access regarding GATS commitments (filter 3.2), but have low market penetrability (filter 3.1). Therefore, the market may be supplied mostly by local firms in the building and construction industry, and the NWP will need to specifically investigate this market together with local firms to determine what strategy to follow to enter potentially this market.

Inter-linkages of the services service industrial clusters in the provincial economy

As an indicator of the integrated nature of the above-identified sectors, one can determine the backward and forward multipliers of each of the primary services cluster sectors of the NWP. For a particular sector, the backward multiplier shows the connections with upstream industries and the forward multiplier the connections with downstream industries. Put differently, the forward and backward multipliers measure the effect on the output of downstream and upstream sectors respectively resulting from a one-unit increase in a sector’s value added (Commission of the European Communities 2007).
### Table 4: Categorisation of Sectors According to Their Backward and Forward Inter-Linkages

<table>
<thead>
<tr>
<th>Variables</th>
<th>Forward-oriented</th>
<th>No rel. forw. effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backward-oriented</td>
<td>Key sectors with widely spread effects</td>
<td>Key sectors with forward effects concentrated</td>
</tr>
<tr>
<td></td>
<td>Key sectors with backward effects concentrated</td>
<td>Key sectors without widely spread effects</td>
</tr>
<tr>
<td>No relevant backward effects</td>
<td>Forward-oriented sectors with widely spread effects</td>
<td>Forward-oriented sectors without widely spread effects</td>
</tr>
</tbody>
</table>

**Notes**: Adapted from the Commission of the European Communities (2007, 15).

This enables us to categorize each primary services clusters’ sectors on the strength and nature of their connections with the rest of the provincial economy. A sector is classified as forward-oriented if its forward multiplier value is greater than the average forward multiplier size for all sectors of the economy. Also, a sector is said to be backward-oriented if its backward multiplier value is greater than the average backward size for all sectors of the economy. ‘Key sectors’ are then classified as those which are simultaneously backward and forward-oriented, reflecting strong connectivity across the entire provincial economy. Also, we can distinguish between sectors that are linked to multiple sectors versus those concentrated in only one or a few sectors (Commission of the European Communities 2007). Table 4 presents such a categorization of the different primary services cluster sectors in the NWP economy.

Figure 5 shows the classification of the activities in the NWP’s SAM based on the classification framework of Table 4. The figure shows that all four of the primary services cluster sectors (i.e., building and other construction; trade; communication; and real estate) are classified as ‘key sector’, which is both backward- and forward-oriented. Three other services sectors also fall within the ‘key sector’ category.

This elementary depiction of the interdependence of the four primary services cluster sectors can be extended by looking at their trade multipliers.

**Trade Multipliers**

The above trade analysis can be extended by the computation of trade multipliers of which the results are shown in Table 5. Unfortunately, since
the 2006 North West provincial SAM has a distinctive rest of the world account (only distributed by destination into rest of South Africa and rest of the world), the value of the import dependence multiplier is close to one for all services accounts. Conversely, the export dependence multiplier shows the change in total income of each domestic rest of the world account resulting from a uniform increase in the flow of income from the rest of the world while keeping fixed the composition of the external account.

The second column in table 5 details own or within-group effects (i.e., total multiplier effect). The wholesale and retail trade and real estate services sectors have the largest multiplier effects, with building and other construction and communication significantly smaller. This indicates that the former would result in greater knock-on effect throughout the provincial economy given an increase in exports.

Apart from this, open-loop multiplier effects (column 4) are, in all cases, quite small. In terms of the open loop effect, the import dependence sub-matrix denotes the direct shares of external expenditure, while the export dependence matrix captures the direct shares of external income.
The indirect or closed-loop effects (column 5) in table 5 show that the magnitude of these numbers is also quite small across the four primary services cluster sectors, but much larger when compared to the other services sectors in the provincial economy. When thinking in terms of the Leontief inverse, it can be seen that when leaving out other domestic linkages it leads to an underestimation of the total multiplier income accruing to domestic production activities. This is a universal problem when the

### Table 5  Trade Multipliers for the NWP to the Rest of the World (2006)

<table>
<thead>
<tr>
<th>Services Sectors</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Import Dependence Multipliers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>0.8854</td>
<td>0.1343</td>
<td>0.1283</td>
<td>0.0578</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>0.8828</td>
<td>0.2244</td>
<td>0.1250</td>
<td>0.0574</td>
<td></td>
</tr>
<tr>
<td>Building and Other Construction</td>
<td>0.8332</td>
<td>0.3210</td>
<td>0.1889</td>
<td>0.1036</td>
<td></td>
</tr>
<tr>
<td>Trade</td>
<td>0.7796</td>
<td>0.1918</td>
<td>0.2640</td>
<td>0.1360</td>
<td></td>
</tr>
<tr>
<td>Accommodation</td>
<td>0.8721</td>
<td>0.2438</td>
<td>0.1386</td>
<td>0.0692</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>0.8389</td>
<td>0.2284</td>
<td>0.1873</td>
<td>0.0859</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>0.7467</td>
<td>0.3063</td>
<td>0.2812</td>
<td>0.1305</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>0.6888</td>
<td>0.1329</td>
<td>0.3179</td>
<td>0.1347</td>
<td></td>
</tr>
<tr>
<td>Real Estate</td>
<td>0.7524</td>
<td>0.2890</td>
<td>0.2515</td>
<td>0.1135</td>
<td></td>
</tr>
<tr>
<td>Business Services</td>
<td>0.7742</td>
<td>0.0441</td>
<td>0.2172</td>
<td>0.0911</td>
<td></td>
</tr>
<tr>
<td>Community, Social and Personal Services</td>
<td>0.7759</td>
<td>0.2130</td>
<td>0.2788</td>
<td>0.1425</td>
<td></td>
</tr>
<tr>
<td><strong>Export Dependence Multipliers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>0.0260</td>
<td>0.0163</td>
<td>0.0037</td>
<td>0.0024</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>0.0077</td>
<td>0.0023</td>
<td>0.0026</td>
<td>0.0017</td>
<td></td>
</tr>
<tr>
<td>Building and Other Construction</td>
<td>0.0357</td>
<td>0.0219</td>
<td>0.0063</td>
<td>0.0042</td>
<td></td>
</tr>
<tr>
<td>Trade</td>
<td>0.1696</td>
<td>0.0747</td>
<td>0.0271</td>
<td>0.0177</td>
<td></td>
</tr>
<tr>
<td>Accommodation</td>
<td>0.0311</td>
<td>0.0033</td>
<td>0.0044</td>
<td>0.0029</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>0.1056</td>
<td>0.0290</td>
<td>0.0137</td>
<td>0.0087</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>0.0611</td>
<td>0.0262</td>
<td>0.0130</td>
<td>0.0086</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>0.0645</td>
<td>0.0064</td>
<td>0.0208</td>
<td>0.0142</td>
<td></td>
</tr>
<tr>
<td>Real Estate</td>
<td>0.1311</td>
<td>0.0268</td>
<td>0.0528</td>
<td>0.0350</td>
<td></td>
</tr>
<tr>
<td>Business Services</td>
<td>0.0544</td>
<td>0.0276</td>
<td>0.0104</td>
<td>0.0068</td>
<td></td>
</tr>
<tr>
<td>Community, Social and Personal Services</td>
<td>0.1500</td>
<td>0.0760</td>
<td>0.0228</td>
<td>0.0151</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**: Column headings are as follows: (1) services sectors, (2) total multiplier, (3) transfer effects, (4) open-loop effects, (5) closed-loop effects.
scope of linkage analysis among domestic institutions is restricted (Tarp, Roland-Holst, and Rand 2002).

Table 5 highlights that the bulk of the benefits arising from policies committed to services growth and innovation, through exports, arise not from the original target sector, but instead as a result of the series of economic connections of which it forms a part. Policymakers fail to see the total costs of their decisions when solely relying on pragmatism and targeting. Policies set on growing and deepening endogenous linkages across the economy, such as market reform policies, will more than likely achieve the most success (Tarp, Roland-Holst, and Rand 2002).

**Conclusions and Policy Recommendations**

The first aim of this paper was to propose service industrial cluster formation as an approach to stimulate service innovation in the NWP. Four service industrial clusters were identified for the NWP. These clusters have potential transformative power to enhance service innovation namely (i) communication, (ii) real estate, (iii) building and other construction and (iv) retail and wholesale trade. The results also show that two of the four clusters’ services have Reos according to the Trade-DSM® for services. The NWP can formulate very specific export promotion strategies based on these results, for each sector that shows potential in specific countries. It is however very important to take note that even though these results are statistically viable Reos, it is still necessary for the NWP to add further value to these results and add in-market information that could influence the final decisions they make. Some market information is not quantifiable and cannot be put into a model or calculated, for example, specific market conditions in Africa that may affect a firm’s actions in that market or specific economic conditions that influence a sector in a short period.

The multipliers show that the wholesale and retail trade, as well as real estate services sectors, would have the largest knock-on benefits in the provincial economy via an increase in their exports. The trade multiplier results show that the majority of benefits arising from a focussed export promotion of services arise not from the original target sector, but from the fabric of economic linkages in which it is embedded. This paper recommends that provincial government use these results to develop specialised services for cluster development in the region. This can initiate or strengthen the competitive advantage of the firms in these sectors and assist in diversifying the output from the province.

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It is recommended that vested interests in industrial cluster formation in the NWP gain an in-depth understanding of the different types of clusters so as to gain an understanding of the characteristics and the necessary conditions required for successful cluster formation (van Dijk and Sverrisson 2003). A distinguishing feature of clusters in developed countries is technology and innovation in product and process designs. This sets clusters in developed countries apart and enables them to become world leaders and standard-setters (Schmitz and Nadvi 1999). Of note to the NWP are high technology clusters. This type of clusters comprises of firms from different, technologically unrelated industries as is the case of the four service clusters identified in this paper (Enright 2003; Amin 1994). This empowers the cluster with innovative capabilities as the technologies of one industry can be adopted to develop new products and new processes in another (Pisa 2014).

The North West provincial government can use these results to formulate clusters by encouraging cooperation between services firms. To drive the success of these clusters, incentives should be offered, and support to build efficient capabilities (Pisa 2014). The NWP government has a crucial part in building sufficient capabilities in these clusters, and assisting them to grow. However, the type of support offered must be carefully designed. Maggioni (2006) suggests that policies should aim to enhance micro-level incentives which provide support to small firms and entrepreneurs to overcome obstacles of commercialisation in the initial phases of development.

Further to this, it is also important to note the needs to services firms specifically, as they are vastly different from firms in other sectors. The NWP government should include knowledge and expertise of specialised services sector experts. Some of the major constraints in the initial phases of development relate to access to finance and big tax constraints that can be overcome by including experts from the private sector that can help design incentives that can actively reduce these obstacles.

In conclusion, services innovation clusters can hold various benefits for economic growth and diversification in the NWP of South Africa. However, this is also an example of how services innovation clusters can contribute to a country’s economy as a whole, and these types of policy approaches are crucial to development in all developing countries. Therefore, the method applied in this paper should offer valuable results to any developing countries aiming to diversify and expand their economies away from traditional growth sectors.
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Communication and Consumer Activities of Social Networking Sites Users: Cases from Germany, Poland and Russia

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The growth of the Internet heavily influences people’s lives every day, especially by the development of Social Networking Sites (SNS), which since their first appearance have been constantly recording a growing number of users. The main purpose of this paper is to identify the significance of SNS in relation to two activities of individual users: communication and consumer behaviour. The study focuses on the three most popular SNS in three neighbouring countries (Germany, Poland, and Russia) namely, Facebook, V Kontakte, and YouTube. The methodological approach is twofold: firstly, the authors developed a theoretical background of the areas of using SNS and formulated research questions; secondly, they applied the PAPI and CAWI methods for the data analysis. Regarding the researched activities, it should be noted that SNS users use these platforms more often for communication than consumer actions. The most useful here is Facebook in comparison to YouTube. This study provides results, which can be useful in the management of the enterprises that use SNS for their marketing communication in Germany, Poland, and Russia.

**Key Words:** communication, consumer behaviour, Facebook, V Kontakte, YouTube  
**JEL Classification:** M31, M37  
https://doi.org/10.26493/1854-6935.15.341-363

**Introduction**

The growth of the Internet has had considerable influence on the lives of people in the 21st century (Ngai et al. 2015). In addition, the use of
Social Networking Sites (SNS) has gained considerable relevance in the lives of people as the constantly growing number of users demonstrate. SNS not only help people from different parts of the world communicate faster with one another (Williams et al. 2012; Lee and Ma 2012) but also influences many areas of their lives, such as education (Cassidy et al. 2014), professional work (Williams and Verhoeven 2008; Gerard 2012), shopping and making consumer decisions (Heinonen 2014) as well as entertainment (Tuten and Solomon 2014, 202). The wide range of SNS use probably stems from their characteristic features. Kaplan and Haenlein (2010) point out that SNS are sets of applications, which are technically and ideologically based on the foundations of Web 2.0. They enable the creation and exchange of content amongst their users. Such characteristics of SNS are based on their nature and are associated with connecting people within groups and exchanging information about both their private and their professional lives. SNS are also a valuable source of information about products and services available in a particular market. Furthermore, more advanced internet tools are available through the development of Web 3.0. In order to identify the significance of the needs of a particular individual it is firstly necessary to obtain information, then gather it and process it in order to finally generate an individualised information package (Garrigos-Simon, Lapiedra Alcamí, and Barbera Ribera 2012). In other words, in Web 3.0 the technology plays the role of an intelligent provider of selected information packages adjusted to the interests and needs of a recipient (Rudman and Bruwer 2016).

The number of SNS based on the Web 2.0 and 3.0 started to grow along with their popularity amongst regular Internet users. This situation came into being because the way people spend their time has changed. Nowadays people are less likely to spend their time in front of the TV and instead spend their time chatting with their friends on SNS or searching for information in Internet forums. The growth of SNS has contributed to changes in the way people think and act (Khan and Vong 2014). Traditional types and methods of individual and marketing communication are often replaced by modern communication methods which seek to help make lives of people and the operation of enterprises easier because they help save time, with regard to the time saved, reduce efforts, and cut costs (Mangold and Faulds 2009; Kietzmann et al. 2011). Due to the range and frequency of using SNS by individual users, SNS have become an obligatory tool applied in the marketing activity of enterprises both on domestic and international markets (Mangold and Faulds 2009; De Vries
et al. 2012; Tuten and Solomon 2014: 45). However, the type of media and the way they are used differ amongst markets (Zhang and Xueb 2015).

The main purpose of this paper is to identify the significance of SNS in relation to two activities of individual users: communication (c) and consumer behaviour (cb) based on the most popular SNS in three neighbouring countries – Germany, Poland, and Russia (Facebook, YouTube and vkontakte). Communication is considered here in light of the Computer Mediated Communication theory (CMC) which means that it is considered to be the process of communicating among users, keeping contact with friends and families. Consumer behaviour via SNS is considered the process of different user activities undertaken by consumers with particular emphasis on the electronic Word of Mouth theory (e-WoM) (e.g. gathering information about products, getting discounts as a member of fan pages). This has resulted in following three research questions:

RQ1 Does the frequency of using the most popular SNS in Germany, Poland, and Russia influence the range of using these SNS in communication and consumer behaviour?

RQ2 Which of the two areas, communication or consumer behaviour, is influenced more by SNS?

RQ3 Which of the analysed SNS (YouTube, Facebook or vkontakte) is used to the greater extent in communication and consumer behaviour?

The ‘Digital in 2016 Report: We Are Social’s’ (Kemp 2016) lists YouTube, Facebook, and vkontakte as those SNS, which are used most frequently in Germany, Poland and Russia. These three countries were selected in order to identify possible similarities and differences in the use of YouTube, Facebook, and vkontakte.

This paper seeks to cover a gap, which exists in the literature concerning the comparison of the significance of SNS in the C and CB fields. The relevance of communication and e-WoM in marketing is emphasized in many publications (Mangold and Faulds 2009; Barreto 2013); there is, however, not much research that looks into the usage of SNS with regard to different countries. This paper, thus, seeks to identify SNS use in C and CB. The knowledge as to how the researched SNS are used by individuals (potential customers) can provide information for enterprises as to how to use those SNS to become more efficient and competitive in the market.

The structure of this paper is as follows: First, the relevant literature
is reviewed. This is followed by a description of the applied methodology. Then the results of the empirical study are presented and discussed. The managerial implications are described next. The paper ends with a discussion, limitations and suggestions for future research.

**The Theoretical Background on the Use of SNS**

**Differentiating SNS**

The characteristic features of SNS and their use depend first on the needs of people and using particular instruments to meet those needs. For example, the need to share one’s travel memories with friends may be met by using a website or communicator such as Facebook, Instagram, or Snapchat (Ryan and Xenos 2011; Nadkarni and Hofmann 2012). YouTube or LinkedIn are less useful here (Kietzmann et al. 2011; Khan and Vong 2014). The SNS, which connect people into the networks of friends that share common features, are Facebook or LinkedIn. With the help of these SNS, users can look for people who are able to provide particular information or help in searching for it (Schouten 2011; Ray 2014). Many people use SNS because these media allow them to express themselves in writing or with video recordings (e.g. blogs, Twitter, Vimeo, YouTube) and because these media allow them to use the information which was placed there by other users (Ward 2006; Munguatosha et al. 2011; Schouten 2011; Nakagawa and Arzubiaga 2014; Kim, Sin, and Tsai 2014; Hamid et al. 2015). These SNS are also used for educational (Howard et al. 2015; Hamid et al. 2015; Sheldon 2015) and consumer activities (Habibi, Laroche, and Richard 2016; Erkan and Evans 2016).

**YouTube**

YouTube was created in 2005 and is one of the rapidly developing media (Madden, Ruthven, and McMenemy 2013) that is visited monthly by over one billion users around the entire globe. It is a very powerful tool (Bonsón, Bednarova, and Escobar-Rodríguez 2014) which allows users to play and share films for free (Chiang and Hsiao 2015; Wendt, Griesbaum, and Kölle 2016). Everyone can become both a producer and consumer of this service. Producers are users who upload their own films and presentations as video recordings; they are called vloggers (Yang and Wang 2015). A prerequisite to do this is to have an account identifying a given user. Vloggers, unlike bloggers, do not describe their ideas in writing but record them as short videos. It is also possible to be a YouTube user.
who only watches materials uploaded by others. These viewers can comment on the videos by expressing their own opinion or by subscribing to a channel of their favourite performer (Chiang and Hsiao 2015). YouTube is a very good source of promoting products and services (especially the unusual ones) in the entire world, which is an invaluable advantage of all SNS (Kietzmann et al. 2011; Khan and Vong 2014). Many enterprises use YouTube to place the commercials of their products, and vloggers present new products appearing on the market.

**Facebook and vkontakte**

Facebook, which is one of the most advanced and popular social networking platform in the world, is used by 1600 million people (Kemp 2016). Registered users can create groups of people or networks of friends with whom they wish to be in contact with through communication (exchange of information), placing photos, films, comments or just likes on the SNS (i.e. social interacting functions). Facebook is a place where users usually show the best (the most beautiful, the funniest, the most important, etc.) situations from their lives which they wish to share with their friends (Yang and Lin 2014). It is a platform used not only by individuals but also by enterprises or various institutions, which want to stay in contact with their buyers, customers, clients, or viewers. Facebook is also a source of information about products and services gathered from friends and from enterprises, which use that SNS as a communication tool.

vkontakte is a social medium used primarily by Russian-speaking users and countries. In the world's ranking it is among the ten 'biggest' SNS in the world when it comes to the number of users (Kemp 2016). It enables its users to exchange messages amongst one another, create groups or public pages, share images (photos, videos), or to play games. It offers similar functions and activities to Facebook, which is why it is called the Russian equivalent of Facebook.

**SNS-TOOLS IN MARKETING COMMUNICATION**

The use of SNS as communication tools by enterprises enhances the processes affecting the market, helps conduct more efficient (quicker and less expensive) marketing research aimed at identifying the needs and preferences of clients and gaining the opinions of consumers on already existing products (Smith and Zook 2011). It also speeds up the identification of changes, which take place in the market, helps create new product and bargain offerings (Chandler and Chen 2015). Applying these instruments...
in international activities significantly reduces operating costs, speeds up
the enterprise’s reaction to changes in markets (message receivers can
be reached faster and more effectively which results in making enter-
prises more competitive) and it helps adjust the offer to different con-
sumer tastes and preferences (Illia and Balmer 2012). Current research
on the significance of SNS in the enterprises’ activities focuses on sev-
eral aspects: The analysis of the influence of posts and commentaries in
media on the image of a company and its performance (e.g. Muntinga,
Moorman, and Smit 2011; Smith, Fischer, and Yongjian 2012), the media’s
significance in e-wom (Chen, Fay, and Wang 2011), the analysis of con-
sumer behavioural models in SNS (Steyn et al. 2011), or the role of SNS in
advertising in international markets (Okazaki and Taylor 2013). This pa-
per focuses on the use of SNS (Facebook, YouTube, V Kонтакте) in com-
munication and consumer behaviour from the perspective of individual
users. This comparison can be a prompt for enterprises using those tools
in their marketing communication and cooperation in Germany, Poland,
and Russia.

SNS IN COMMUNICATION (C) WITHIN THE CONTEXT OF CMC
THEORY

Communication is the process of exchanging information between the
sender and receiver through a specific channel (Gudykunst, Ting-Toomey,
and Chua 1988; Davies, Musango, and Brent 2016). In individual com-
munication, both sender and receiver are individual units exchanging
a message via a communication channel (verbal and non-verbal) and
medium. However, in marketing communication, at the place of the
sender is usually an enterprise and the place of the receiver is the po-
tential customer (Clow and Baack 2015, 23). Based on the Computer
Mediated Communication (CMC) theory, the internet takes a role of a
medium in the interpersonal communication process (Walther 1996) and
SNS are internet tools used for communication amongst individuals who
use that particular medium. They are able to not only text the messages
(e.g. Facebook, V Kонтакте) but also to listen or record it (e.g. YouTube,
WhatsApp, Youku). The communication level and type differs according
to the chosen medium. CMC participants transfer the message quickly
without cost and possibly to many receivers at the same time (Smith
and Zook 2011, 11). In the CMC concept, the use of SNS reduces the per-
sonal influences and their effects in the communication process (Walther
1996). Within the context of this paper and the CMC theory, both the

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sender and the receiver of the communication process are users of SNS.

Regarding the CMC theory, the medium used in the communication process are the different types of SNS. Within the context of this paper, the focus is on Facebook, YouTube, and VKontakte as the tools that are used in CMC. Facebook was designed to permit students to communicate with each other (Aburai, Ishii, and Takeyasu 2013), send materials, and search for different types of information (Krasnova et al. 2012). Ellison, Steinfield, and Lampe (2007) showed that Facebook is an effective tool for communicating amongst friends or family’s members, but it is not a significant tool which is used to meet new people. The study showed that 94% of young American Facebook users communicated daily with around 150–200 people from the friend list, and that most of these people were also friends in the offline world (Ellison, Steinfield, and Lampe 2007). Ross et al. (2009) also emphasized the significance of Facebook as far as communicating with friends is concerned. Moreover, the relationships between the various uses of Facebook and personality traits revealed, for example, that extraverts belong to a greater number of Facebook groups than others whilst introverts are more prone to get involved in social activism. In one of the latest studies, Davies, Musango, and Brent (2016) emphasize the significance of Facebook as means of communication for diversified purposes. Their research, however, is focused on the interdependence of using Facebook (time spent on this website) and the quality of interpersonal communication. It seems that Facebook is a valuable tool to develop and differentiate the means of interpersonal communication. Similar results obtained by Ng (2016) show that the main purpose of using Facebook by both Japanese users and those from Hong Kong is communication with friends and entertainment. Hsu et al. (2015) also studied the intention of using SNS, mainly Facebook, in five culturally different countries; namely, Australia, Austria, Japan, Taiwan, and the United States. The results show that for the users from individualistic countries, SNS are primarily the source of information whereas for the users from collectivistic cultures, socialization and self-presentation are the main motivators. YouTube has also some functions, which enable social interactions, e.g. adding comments and likes or sharing videos (Khan and Vong 2014). The YouTube user communicates via other channels than Facebook because they create and watch videos instead of posting and reading texts. Vloggers are senders in the communication process when they upload their videos or various materials, and the receivers are the users who watch this material. Receivers respond in that communi-
cation process usually by commenting on the videos. Both YouTube and vkontakte are not often researched when it comes to communication in the international marketplace. This exploratory study is an attempt to fill this research gap.

**SNS IN CONSUMER BEHAVIOUR (CB) WITHIN THE CONTEXT OF E-WOM THEORY**

The specifics of sns means that they are also tools used in the consumer behaviour of their users, e.g. by searching for information about particular products that will help their users reach a consumer decision (Iyengar, Han, and Gupta 2009; Barker and Ota 2011), sharing knowledge about the products with other sns users (Ho 2014), paying attention to advertisements presented in those media (Okazaki and Taylor 2013), and in participating in the competitions announced by enterprises (Barreto 2013; Steyn et al. 2011). Most of the research focuses on the significance of sns in sharing information about products amongst users and expressing opinions about brands (Wallace, Buil, and De Chernatony 2014). This means of gathering and exchanging information from informal sources (e.g. friends, family, and neighbours) via the Internet is called electronic Word of Mouth (e-WoM) in marketing theory (Kaplan and Haenlein 2011). E-WoM, thus, represents client satisfaction shared via the internet (also sns). The higher the satisfaction, the more positive the opinion will be of a product, brand, or enterprise (Jalilvand and Samiei 2012). Positive opinions shared amongst customers may contribute to building a good brand and company image (Wallace, Buil, and De Chernatony 2014) while negative comments may contribute to image loss (Balaji, Khong, and Chong 2016) as negative opinions are more effective than positive ones (Grégoire, Salle, and Tripp 2014; Balaji, Khong, and Chong 2016). sns are the platforms that are used very often for both gathering and exchanging information about products and producers. For example, the research conducted by Ho (2014) amongst Facebook users showed that the positive opinions of friends on a particular product directly influence trust for that particular brand. In other words, the communication between Facebook users (e-WoM) greatly influences the way a brand is perceived and in building brand trust (Kucukemiroglu and Kara 2015; Hudson et al. 2016). YouTube is also a sns, which is used to a significant extent in e-wom. It is considered to be a repository of knowledge about markets, consumers, products, and services because information shared on YouTube in the form of videos comes from users who are also

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consumers (Pace 2008; Wendt, Griesbaum, and Kölle 2016). Vloggers often record videos and publish them on YouTube in order to recommend products they bought and which are of good quality or warn other users against low quality products. Such videos are commented on by other users. This means that the opinions of many users, often from remote parts of the world, can be collected and accessed (Pace 2008; Madden, Ruthven, and McMenemy 2013). Numerous studies are conducted on the analysis of comments placed on YouTube under a particular video. They show that these comments are related in, for example, language, form of expression and expressed opinions (views). They seek to identify and characterise a potential target for a particular product (Thelwall, Sud, and Vis 2011). Moreover, YouTube is an sns, which is often used by companies to present the features of new products that are being introduced to the market (Wendt, Griesbaum, and Kölle 2016). This is most often done by popular YouTubers – vloggers – who have received such a product for testing. These videos can often be a good source of information for indecisive consumers who can choose from several products in a particular category. Despite the way YouTube is used in the consumer behaviour context, there is not much research in that field. V Kontakte, although it is the most popular sns in Russia, is not as researched as much as Facebook.

**Method**

**MEASUREMENT DEVELOPMENT AND DATA COLLECTION**

Methodologically, this paper takes a deductive approach; and the aim is to answer the three research questions arising from the literature review. In the exploratory empirical study, the authors used two research methods: **PAPI** (Paper and Pen Personal Interview) and **CAWI** (Computer Assisted Web Interview). The measurement instrument was a standardized questionnaire prepared specifically for the purpose of this research. The questionnaire that was used in the three countries was identical except for the respective language. Before the final questionnaire was used in the study, a back translation procedure was used to eliminate any mistakes stemming from linguistic, lexical, or context differences (Craig and Douglas 2006).

The empirical data were collected in 2016, and the total number of respondents surveyed in the three countries was 566; including 117 respondents from Germany, 296 from Poland, and 153 from Russia. At first,
Ta\,b\,l\,e 1  Respondent Characteristics Based on Gender and Age (\%)  

\begin{tabular}{|l|c|c|c|}  
\hline  
Characteristics & Germany & Poland & Russia \\
\hline  
Gender & & & \\
Women & 50.4 & 70.9 & 60.6 \\
Men & 49.6 & 27.7 & 39.4 \\
No data & 0.0 & 1.4 & 0.0 \\
\hline  
Age & & & \\
15–20 years & 14.5 & 35.5 & 45.5 \\
21–30 years & 82.9 & 63.8 & 51.5 \\
31 years and more & 2.6 & 0.7 & 3.0 \\
\hline  
\end{tabular}

a random sampling method was used, but the return rate was very low which is why the authors decided to use non-random sampling. Designated research assistants gathered the questionnaires from the respondents in each market. The different size of the respective groups along with the non-random sampling method influence, of course, the results, which is why it is not possible to fully generalize the results of this study.

**RESPONDENT PROFILE**

Regarding the respondents’ profile, two factors were revealed: Gender and age. In the German group a similar number of women and men was surveyed; none of the genders predominates. The Polish and Russian groups had an almost similar gender structure. Around 70% of the respondents were women amongst Polish respondents and 27.7% men. The gap between Russian women and men was slightly smaller than in the Polish group. Around 60% of the Russian respondents were women and around 40% were men.

With regard to age, differences that are more significant were recorded. Amongst the German respondents, the age group of 21–30 year olds predominated which was similar in the Polish group. In the Russian group, the number of people in the age group of 15–20 year olds and in the age group of 21–30 year olds was nearly the same. The older respondents (\( \geq 31 \) years) were in the minority.

**VARIABLES OPERATIONALIZATION**

The results of the literature review revealed three research questions: Firstly, whether the frequency of using the most popular SNS in the researched countries influences the range of using these SNS in communication and consumer behaviour? Secondly, which area – communication or consumer behaviour – is more influenced by SNS? Thirdly, which
of the analysed sns (YouTube, Facebook or vkontakte) is used to the
greater extent in communication and consumer behaviour?

Measures used in the study were developed by the authors based on re-
search trials conducted by the authors among sns users. Variables were
operationalized in two ways. Firstly, to identify the frequency of using
Facebook (fb), YouTube (yt) and vkontakte (vk), the indicators of the
structure of the respondents who use it every day, at least once a week, at
least once a month, and have an account but do not use it or do not use it
at all, were analysed. Cronbach’s Alpha was used to analyse the reliabil-
ity of the frequency scale. Since Cronbach’s $\alpha = 0.78$, it confirms that
the proposed scale is a reliable tool for measuring.

Secondly, Spearman’s rank correlation coefficient was used to identify
the interdependence between the frequency of using the most popular
sns in the communication and consumer behaviour activities. It was ap-
plied in order to examine the strength of correlation between quantitative
characteristics due to the small number of observations (Yue, Pilon, and
Cavadias 2002). The calculation was made separately for every studied
group because of their distinctness as well as the intention of identifying
any possible differences between them. In order to identify the activi-
ties via sns, the respondents were asked to determine the frequency of
the behaviour by indicating the category – very often, often, from time
to time, rarely, very rarely, never (Cronbach’s $\alpha = 0.689$, thus confirming
that the proposed scale was a reliable tool for measuring). The com-
munication activities developed during the trial measurement are (the
most frequent sns used for these activities were added): Maintaining
contacts with friends – fb, vk (c1), maintaining contacts with family
– fb, vk (c2), meeting new people with similar interests – fb, vk, yt
(c3), exchanging views and opinions on different topics with others –
fb, vk, yt (c4), placing photographs and films – fb, vk, yt (c5), rec-
ommending interesting sites to other users – fb, vk, yt (c6), inviting
friends/acquaintances to various events – fb, vk, yt (c7), placing in-
formation I became interested in – fb, vk, yt (c8), making comments
on the information placed by other users – fb, vk, yt (c9). The con-
sumer behaviour activities developed during the trial measurement are:
Looking for information about different products – fb, vk, yt (cb1),
asking friends/acquaintances for advice concerning the purchase of some
product – fb, vk (cb2), recommending products for which somebody’s
opinion is valuable – fb, vk, yt (cb3), placing appropriate information
when the bought product is of low quality – fb, vk, yt (cb4), plac-
Małgorzata Bartosik-Purgat, Oxana Filipchuk, and Michael B. Hinner

<table>
<thead>
<tr>
<th>Frequency</th>
<th>SNS</th>
<th>Germany</th>
<th>Poland</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least once a day</td>
<td>FB</td>
<td>88.03</td>
<td>89.86</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>YT</td>
<td>69.6</td>
<td>61.5</td>
<td>50.3</td>
</tr>
<tr>
<td></td>
<td>VK</td>
<td>No data</td>
<td>No data</td>
<td>58.5</td>
</tr>
<tr>
<td>At least once a week</td>
<td>FB</td>
<td>11.13</td>
<td>2.33</td>
<td>21.3</td>
</tr>
<tr>
<td></td>
<td>YT</td>
<td>20.5</td>
<td>19.26</td>
<td>27.2</td>
</tr>
<tr>
<td></td>
<td>VK</td>
<td>No data</td>
<td>No data</td>
<td>15.1</td>
</tr>
<tr>
<td>At least once a month</td>
<td>FB</td>
<td>2.56</td>
<td>1.01</td>
<td>22.1</td>
</tr>
<tr>
<td></td>
<td>YT</td>
<td>14.5</td>
<td>8.1</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>VK</td>
<td>No data</td>
<td>No data</td>
<td>8.2</td>
</tr>
<tr>
<td>I have an account but do</td>
<td>FB</td>
<td>0.85</td>
<td>1.35</td>
<td>21.4</td>
</tr>
<tr>
<td>not use this platform</td>
<td>YT</td>
<td>0.85</td>
<td>0.0</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>VK</td>
<td>No data</td>
<td>No data</td>
<td>11.0</td>
</tr>
<tr>
<td>I do not use it</td>
<td>FB</td>
<td>5.13</td>
<td>4.73</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>YT</td>
<td>2.56</td>
<td>7.8</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>VK</td>
<td>No data</td>
<td>No data</td>
<td>7.2</td>
</tr>
</tbody>
</table>

ing sell/buy offers – FB, VK, YT (CB5), watching advertisements placed at SNS – FB, VK, YT (CB6), placing advertisements of products and services – FB, VK, YT (CB7), I obtain discounts from the enterprises and shops somebody is a fan of – FB, VK (CB8), taking part in competitions organized by the enterprises – FB, VK (CB9).

Results

The SNS’ frequency usage showed some differences among the respondents. In the Polish and German groups, FB and YT were the SNS indicated as the most frequently used (please see table 2).

FB is used at least once a day by around 90% of the Polish and German respondents. In the Russian group, there was a significant difference in the number of people using FB in comparison with the Polish and German respondents. This is due to the presence of VK in the Russian market, which is used daily by 58.5% of the Russian respondents. On the other hand, YouTube is used at least once a day by 69.6% of the German, 61.5% of the Polish, and 50.3% of the Russian respondents surveyed. Many people also use these SNS at least once a week, and a very low percentage of respondents do not use them at all.

Managing Global Transitions
To indicate the correlations between the frequency of using SNS and the range of activities described as communication (c), the authors used Spearman’s rank correlation (please see table 3).

Referring to FB, in the Polish group the strongest correlations between the activities in the area of communication and the frequency of use of this SNS were obtained for c1 (maintaining contacts with friends via FB). Also in the German group, the strongest relations were gained when communicating with friends via Facebook (c1). The more often the respondents use FB, the more often they communicate with friends. It needs to be emphasized that in the German group, the authors achieved positive correlations \( p < 0.01 \), mostly with medium strength \( > 0.3 \) in relation to all the distinguished activities in communication. Similar results were obtained in the Polish group; however here, there are no statistical correlations between the frequency of using FB and contacting new people who share similar interests (c3) and inviting friends via FB to various events (c7). This confirms the results of Ellison, Steinfield, and Lampe’s (2009) study, which showed that communication via FB takes place mainly with friends from the offline world. The same number of correlations \( p < 0.01 \) and \( p < 0.05 \) were obtained in the Russian group where more frequent use of FB is related to inviting friends to events (c7).
and placing interesting information there (c8), recommending interesting websites (c6), and meeting online new people with similar interests (c3), etc. What is interesting is that Russians maintain contacts with friends and family members mostly using VK, not FB (please see table 3). Furthermore, the frequency of using VK is related to c4 ($p < 0.05$), c5 ($p < 0.01$) and c8 ($p < 0.01$). However, it should be noted that the strength of $R$ in the Polish and Russian groups is smaller when compared to the German group. These results lead to the conclusion that FB is the most important sns for communication in the German group.

As far as YT is concerned, it needs to be pointed out that positive and statistically significant ($p < 0.01; p < 0.05$) correlations referring to the frequency of using this service and the types of communication were obtained from a smaller number of activities. There are relationships between the frequency of YouTube’s use and the communication activities amongst Polish respondents in most cases. However, the strength of those relationships is at a weak level ($< 0.3$). In the German and Russian groups, the authors observed two statistically significant correlations between these variables in each group. It should be noted that the strength of the relationships obtained in the Polish group is established at a weak level ($< 0.3$) as well. Based on the results presented in table 3, the partial answer to the third research question can be formulated that the sns, which is used most often for communication, is FB in Germany and Poland and VK in Russia. All respondents from these three countries communicate more with FB or VK than they do with YT. However, there were some statistically significant relations identified in the Polish group with regard to communication activities and YT. However, the analysis of the strength of these relationships showed that is much higher with regard to FB than it is for YT.

An analysis of the results which were obtained in relation to the area of consumer behaviour (CB), which are determined by the CB1 ... CB9 activities showed a significantly smaller number of statistically significant correlations ($p < 0.01$ and $p < 0.05$) than is the case for communication (please see table 4).

Regarding FB, it is worth emphasizing that in the German and Russian groups a great number of statistically significant ($p < 0.01$ and $p < 0.05$) correlations between the frequency of using that sns and CB were noted. Moreover, Spearman’s coefficients denoting the strength of the relationship as a medium were observed ($> 0.3$) for CB4, CB5, CB7, and CB8. What is interesting is that Russian respondents used VK more
Communication and Consumer Activities of Social Networking Sites Users

Table 4: Spearman’s Rank Correlation Indicators between the Frequency of Using Facebook/YouTube/vKontakte and Consumer Behaviour Activities

<table>
<thead>
<tr>
<th></th>
<th>Facebook (p)</th>
<th>Facebook (r)</th>
<th>Facebook (g)</th>
<th>YouTube (p)</th>
<th>YouTube (r)</th>
<th>YouTube (g)</th>
<th>vKontakte (p)</th>
<th>vKontakte (r)</th>
<th>vKontakte (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB1</td>
<td>0.127*</td>
<td>-0.044</td>
<td>0.140**</td>
<td>0.175*</td>
<td>0.166*</td>
<td>0.125*</td>
<td>0.136*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB2</td>
<td>0.165*</td>
<td>-0.119</td>
<td>0.188*</td>
<td>0.125*</td>
<td>0.086</td>
<td>0.035</td>
<td>0.254**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB3</td>
<td>0.127*</td>
<td>0.112</td>
<td>0.167*</td>
<td>0.157*</td>
<td>0.145*</td>
<td>-0.034</td>
<td>0.044</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB4</td>
<td>0.080</td>
<td>0.379**</td>
<td>0.128*</td>
<td>0.197*</td>
<td>0.069</td>
<td>0.027</td>
<td>0.121*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB5</td>
<td>-0.031</td>
<td>0.316**</td>
<td>0.106</td>
<td>0.192*</td>
<td>-0.032</td>
<td>0.098</td>
<td>0.076</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB6</td>
<td>0.056</td>
<td>0.287**</td>
<td>0.173*</td>
<td>0.191*</td>
<td>0.045</td>
<td>-0.116</td>
<td>0.030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB7</td>
<td>-0.008</td>
<td>0.355**</td>
<td>0.044</td>
<td>0.100</td>
<td>-0.081</td>
<td>-0.007</td>
<td>0.192*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB8</td>
<td>0.119*</td>
<td>0.322**</td>
<td>0.374**</td>
<td>0.109</td>
<td>-0.087</td>
<td>0.035</td>
<td>0.119</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB9</td>
<td>0.036</td>
<td>0.296**</td>
<td>0.362**</td>
<td>0.174*</td>
<td>0.088</td>
<td>0.167</td>
<td>0.077</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Column headings are as follows: (p) Poland, (r) Russia, (g) Germany. * Correlation is significant at the p < 0.05 level. ** Correlation is significant at the p < 0.01 level.

Often than FB when looking for information about products (CB1) and asking friends for advice (CB2). This can be correlated to the results obtained for communication. FB is also the SNS, which is often used for consumer activities amongst German respondents. The strongest relationships (> 0.3) were identified for CB8 and CB9. Furthermore in the German group, the frequency of FB’s use is related to looking for information about products (CB1), asking friends about products (CB2), recommending products when they are worthy of it (CB3), and watching advertisements (CB6).

In the Polish group, the respondents showed a smaller number of consumer activities related to the frequency of using FB. The more often the Polish respondents use this platform, the more often their actions refer to CB1, CB2, CB3 and CB8. Furthermore, all of them represent a small level of strength (< 0.3). In addition, an interesting observation is that all the groups (Germany, Poland and Russia) showed a statistically significant positive correlation between the frequency of using FB and receiving discounts at shops of which the respondents are fans (CB8). This is an important message for enterprises, which use FB in their marketing communication activities. The results of this study indicate which activities their potential customers use and are interested in.

The data collected in relation to YT show that the majority of statis-
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...tically significant ($p < 0.01$ and $p < 0.05$) correlations between the frequency of using this platform and CB was identified amongst Polish respondents (CB1, CB2, CB3, CB4, CB5, CB6, CB9). Both the Russian and the German respondents use YT when looking for information about different products (CB1). In addition, the Russian respondents use YT more to recommend products, which are of good quality (CB3). The $R$ indicators achieved for YT are not very strong ($< 0.3$).

Concluding the results presented above, it can be noted that in the area of CB, FB is a platform used more often than YT in the German and the Russian groups. The Polish respondents showed a greater correlation between CB activities and YT usage than FB.

**Conclusions and Managerial Implications**

This exploratory study concludes that many consumers use FB, YT, and VK (for the Russian group). The results of our study also revealed similarities and differences amongst German, Polish, and Russian consumers. The literature review indicated that FB is a platform that is used mainly for communication activities – especially for communication with friends and families (Ellison, Steinfield, and Lampe 2007; Ross et al. 2009, Abu-rai, Ishii, and Takeyasu 2013; Davies, Musango, and Brent 2016). Our study confirmed these results. In the Polish and the German groups, more frequent use of FB results in more frequent communication with friends and family members. The Russian respondents use VK (instead of FB) more frequently for those purposes. The correlation analysis showed considerably more communication activities via FB than via YT. In all three groups, the majority of the respondents use FB primarily to exchange views and opinions with other FB users, share their photos and videos, share interesting information they found, or comment on the information of others. This is an added value of our exploratory study, which was not researched in most other studies. Our study also revealed that Russian respondents very often use VK for the same purposes. This might prove to be valuable information for enterprises wishing to enter the Russian market because they should create a VK account and place information about themselves on VK. In fact, Baran and Stock (2015) compared VK and FB in terms of ease of use, usefulness, trust, fun, impact and diffusion, and found that Russians actually rank VK higher than FB.

According to Khan and Vong (2014), YT has many functions which enable such social interactions as sharing videos or commenting on sub-
mitted materials. Our study showed that the strongest relationships existed between using yt and placing respondents’ photos and videos, recommending websites to the audience, and placing interesting information on yt. This backs up Khan and Vong’s (2014) findings. However, c is used less frequently by YouTubers (yt users) than it is by fb and vk users.

When it comes to consumer behaviour, the literature review revealed that fb is an effective and useful tool for exchanging information about products and enterprises (Ho 2014; Grégoire, Salle, and Tripp 2014; Balaji, Khong, and Chong 2016). fb can also be an instrument for building enterprise and product trust when positive opinions are used within the context of e-WoM (Kucukemiroglu and Kara 2015; Hudson et al. 2016). On the one hand, the results of our study confirmed the results of previous research. On the other hand, our study revealed some new areas of fb use. It is interesting that in all three groups the more people use fb, the more they are interested in obtaining discounts from the enterprises and shops of which they are fans. Russian and German customers are also eager to take part in competitions organized by the firms of which they are fans. This can be very useful information for companies that use fb for their marketing communication activity. In fact, such consumer involvement (competitions, sharing information about events and other activities, offering discounts to fans) can be used by enterprises as a great tool in building a loyalty program. Another important factor is that the enterprises should monitor and check all information that appear about them both in fb (also vk) and yt. The results of our study showed that customers are eager to share both positive and negative opinions about products, producers and brands (in all sns we researched).

When it comes to consumer activities and yt users, it can be concluded that yt is a base of knowledge about consumers and producers. The literature review showed that the analysis of the videos and the comments submitted to that platform and the comments thereof are a good source for recognizing consumers’ needs and market trends (Pace 2008; Wendt, Griesbaum, and Kölle 2016). This is also confirmed by our study. For all three groups, yt is considered a good platform for placing information about products, innovations, enterprises, commercials, etc. as noted by Mangold and Faulds (2009). This is especially true for the Polish group.

Summing up the results, it can be concluded that fb and vk are used more than yt for c and cb. When comparing the c and cb activities,
it should be noted that respondents use SNS more often for communication than consumer actions. However, it needs to be stressed that our study revealed differences, which exist between Germany, Poland, and Russia. Furthermore, the general conclusions cannot be standardized for all markets. This study provides results, which can be useful to enterprises when planning and conducting their marketing activities in Germany, Poland, and Russia.

**Limitations and Suggestions for Future Research**

Conducting empirical studies and using primary methods is usually associated with certain limitations and these only increase when researching in multiple countries. There are some limitations related to the presented research and its scope. Firstly, questionnaires can be problematic because respondent might select answers that are very different from their actual behaviour. The most effective method to minimise this risk is through observational research. Another issue is that the non-random sampling and the sample size create a problem because it is not possible to extrapolate the results for the entire population of the surveyed country. This notwithstanding, research limitations are very often a stimulus to either continue the study or expand it; especially when it comes to international activities. The international scale of research on the utility of SNS could be expanded and improved via random sampling and larger samples. For the future research, it could be useful to identify some products’ categories and ask respondents about their behaviour with regard to C and CB activities via SNS. Such findings would bring more managerial implications for producers of specific goods.

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According to the ELAN study and a substantial body of previous research, a significant amount of business is being lost in the EU due to a lack of language skills. In our article, we analyse how Austrian and Slovenian small and medium-sized enterprises (SMEs) adopt language management strategies (LMSs). We investigate, by means of a questionnaire sent to Slovenian and Austrian SMEs, how aware they are of the ELAN findings, what language strategies they have adopted and whether the knowledge of English is sufficient for their successful business operations on global markets. The findings show that Slovenian exporting SMEs are not completely aware of the benefits a language management strategy could bring to their business operations on foreign markets. In contrast, Austrian exporting SMEs are more likely to provide language training for their staff, employ native speakers, and use local agents for their language needs considerably more often, as well as use the services of professional translators and interpreters almost three times more often.

**Key Words:** ELAN study, foreign language skills, language management strategy, SMEs

**JEL Classification:** L1, Z13

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**Introduction**

When the ELAN (Effects on the European Union Economy of Shortages of Foreign Language Skills in Enterprise) study was published ten years ago, the link between foreign language skills and the exporting success of European SMEs was uncovered (European Commission 2006). Despite the fact that the research commissioned by the Directorate General for Education and Culture of the European Commission prepared recommendations for action at local, regional, national and European level, it appears that not enough has been done in order to improve the situation...
in European SMES with regard to language skills, cultural competences and exporting performance.

In 2004, the research carried out by the UK Subject Centre for Languages (Gallagher-Brett 2004) identified more than 700 reasons to study languages, which were arranged into a set of the following categories: citizenship, communication, economic, social and political dimensions, democracy, diversity, employability, environmental sustainability, equal opportunities, globalization, identity, intercultural competence, international dimension and foreign policy, key skills, language awareness, mobility/travel, multilingualism, personal and social development of the individual and values. Our research directly addresses only some economic issues related to foreign language skills in exporting SMES.

It is interesting to note that the Global Entrepreneurship Monitor (GEM), the world’s foremost study of entrepreneurship, never mentions linguistic obstacles in their annual global reports. During the last ten years only the 2012 Global Report reported that ‘language and cultural barriers may limit employment opportunities’ (GEM 2012). The world’s foremost study of entrepreneurship that strives to understand the entrepreneurial phenomenon seems to have overlooked the problem of foreign language skills in global entrepreneurial endeavours. Similarly, in the period from 2010 to 2014, Slovenia GEM reports never mentioned the importance of language skills for enterprises, let alone the connection between language skills and higher profits, revenues and market share of companies on the one hand and the lack of them that may lead to failed transactions and lost business opportunities on the other.

A language management strategy (LMS) is a set of measures and techniques used to prevent linguistic barriers from occurring in new foreign markets. The strategy addresses specific communication issues relevant to the particular market, many of which can be transferred to other markets.

Companies entering new markets should adapt their strategy to new linguistic and cultural needs. Among the many elements, the following language strategies can bring benefits to exporting enterprises: recruiting native speakers from your target markets, appointing company employees who already possess language skills, using professional translators and/or interpreters, developing a language plan or strategy for handling communication barriers before you start exporting to a particular country, language training for staff, cooperation with universities and multilingual websites.
Literature Review

Strategic language management is a nascent field within management research. It is defined as ‘the extent to which the company is able to satisfy its language needs through prudent deployment of a variety of language management tools including for example language training and expatriation’ (Feely and Winslow 2005). The link between foreign language skills and export success has been studied at both a macroeconomic and microeconomic level. At the macroeconomic level, researchers try to answer the question how language variables affect economic variables. Multilingualism studies carried out at the University of Geneva arrived at the conclusion that Swiss multilingualism generated 9% of GDP (Grin, Vaillancourt and Sfreddo 2009). Not mastering a foreign language is seen by Foreman-Peck (2007) as a tax on trade, Frankel and Rose (2002) and Helliwell (1999) have quantified the cost of language barriers as between 15% and 22% in terms of tariff equivalents. At the microeconomic level, researchers measure the impact of the lack of language skills on export performance. The elan study (European Commission 2006) and the British Chamber of Commerce language survey (Sidnick 2004) belong to this type of research.

Half a billion citizens working in more than 22 million enterprises in 28 member states that use three alphabets and 23 official languages are often unable to fully exploit the opportunities offered by the single market. Whether they work in multinational companies or smes, they are rarely aware of the state of their language resources.

According to some authors, strategic language management can contribute positively to company competitive advantages (Dhir and Gökè-Pariolá 2002; Hagen 2011; Marschan, Welch, and Welch 1997; Forman-Peck and Zhou 2014).

The ‘Report on Language Management Strategies and Best Practice in European smes’ (2011, 4) recommends the following language management strategies (lmss): use of local agents to solve language problems, creation of websites with special cultural and/or linguistic adaptations, use of linguistic audits, use of professional translators/interpreters, translation of promotional sales and/or technical materials, language training and cultural briefing schemes, online language learning, employee selection and recruitment policy, staff mobility, ‘buddying’ with foreign colleagues and cross-border secondment schemes, forging links with local universities, taking on foreign students on placement, native-speaker re-
cruitment, e-commerce involving multilingual operations and product or packaging adaptation in line with local tastes and customs.

Impact analysis derived from the ‘Report on Language Management Strategies and Best Practice in European smes’ (2011, 21) shows that adopting an LMS has been linked to a 25% increase in export sales of 41% of surveyed companies, with a further 35% of companies who reported a 16–25% increase and 18% of companies who reported an increase between 6 and 15%. Only 6% of companies reported an increase of between 1% and 5%. The two most cited aspects were multilingual website adaptation and use of local agents to solve language problems.

**Methods**

The research for this study comprised of a questionnaire-based survey and national and international literature review.

In order to find out how small and medium-sized enterprises, which are active in some form of international activity, tackle language barriers, a questionnaire was sent to 150 Slovenian small and medium-sized enterprises through electronic mail towards the end of 2016. We received 79 responses that could be used in our research.

For the Austrian sample, we conducted an online questionnaire. This questionnaire was distributed in January and March 2017 by the Austrian Federal Economic Chamber (Wirtschaftskammer Österreich) in Styria. The Austrian Federal Economic Chamber is divided in seven divisions, comprising the sectors crafts and trades, industry, commerce, bank and insurance, transport and communications, tourism and leisure industries, information and consulting. The questionnaire was sent to 3,319 smes. 2,421 of these companies had one to nine employees, 709 companies had ten to 49 employees and 189 had 50 to 249 employees. A total of 90 institutions submitted valuable data. The response rate was 3.74%.

The closed-ended questionnaire sent to the surveyed companies comprised of only 13 questions. All except one question were in the form of multiple choices with three to five provided answers. One question was in the tick-all-that-apply format. Taking into account the fact that people are often reluctant about taking surveys we wanted to make our questionnaire as short as possible and still gather enough valuable data for our research.

**Findings**

In order to get a picture of the size of the companies surveyed, our first question was about the percentage of their sales turnover that was ex-
ported. If a responding company answered 0%, it was excluded from the survey. We were interested in whether the surveyed companies had a management strategy, if this strategy was available in a written document, and whether the company believed that there was a link between the use of foreign languages and export performance. In addition, we inquired whether the companies surveyed believed that their investments in language skills had a significant return, whether they employed native speakers, used local agents and/or professional translators and interpreters for their language needs and whether they hired staff with language skills to match their foreign markets. We also wanted to know if companies had lost a contract due to the lack of foreign language skills, because we wanted to see whether our findings are in any way similar to the findings of the elan study (European Commission 2006), where nearly half of the surveyed companies said they had a language management strategy, and where one in ten enterprises stated they had lost a contract due to the lack of foreign languages.

The questionnaire was sent to selected Slovenian smes in 2016 and to the Austrian smes at the beginning of 2017. We received 92 questionnaires from Slovenian smes in due time, of which 79 were complete and could be used in further analysis, and 256 from Austrian smes in March 2017. After incomplete questionnaires were excluded from the sample, 90 Austrian smes were used for further analysis. Our combined sample comprised respondents from 169 Austrian and Slovenian smes (enterprises with zero exports and with more than 250 employees were excluded).

The majority of Slovenian companies belonged to the group of companies that export between 21% and 40% of their turnover (39%). This group was followed by companies that belonged to the group that exported between 1% and 10% of their turnover (28%). The third group of companies exported more than 40% of their turnover (20%). Only 13% of surveyed companies exported between 11% and 20% of their turnover.

As for the surveyed Austrian smes, the largest group of smes comprised those companies that exported between 1% and 10% of their turnover (50%), followed by the group of companies that exported more than 40% (slightly more than 23%) and smes that exported between 21% and 40% of their turnover and between 11% and 20% of their turnover (slightly more than 13%). The analysis of the answers provided by surveyed companies brought us to the results presented in table 1.

- 58% of Slovenian smes believe there is a link between the use of language management strategies in Austrian and Slovenian smes.
### Table 1: Elements of a Language Management Strategy

<table>
<thead>
<tr>
<th>Item</th>
<th>SLO</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link between languages and performance</td>
<td>Yes</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>17</td>
</tr>
<tr>
<td>Investments in language skills and returns</td>
<td>Yes</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>33</td>
</tr>
<tr>
<td>Employment of formal LMS</td>
<td>Yes</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>31</td>
</tr>
<tr>
<td>Employment of native speakers</td>
<td>Yes</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>39</td>
</tr>
<tr>
<td>Use of local agents</td>
<td>Yes</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>37</td>
</tr>
<tr>
<td>Use of translators and interpreters</td>
<td>Yes</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>52</td>
</tr>
<tr>
<td>Hiring of staff with language skills</td>
<td>Yes</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>38</td>
</tr>
<tr>
<td>Lost contracts due to the lack of language skills</td>
<td>Yes</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>62</td>
</tr>
</tbody>
</table>

**Notes:** All values as percentages.

- foreign languages and export performance; 10% of the companies do not share the same opinion and 17% of companies do not know if such a link exists.

- 77% of Austrian smes see a link between the use of foreign languages and export performance, followed by almost 11% of smes who do not see such a link and 12% of companies that do not know whether such a link exists.

- 53% of Slovenian and 48% of Austrian smes believe that their in-
Investment in language skills has a significant return; 14% of Slovenian and 19% of Austrian SMEs do not believe so and a third of surveyed enterprises, Slovenian and Austrian, do not know if this is the case.

- Only 20% of surveyed Slovenian SMEs have a formal LMS. 62% of enterprises stated that they did not have such a strategy and slightly less than one-fifth (18%) of the companies do not know whether such a strategy exists in their company.

As for the Austrian SMEs, slightly more than 18% of companies have an LMS, 78% stated that they do not have such a strategy and 4% of SMEs do not know whether the company has such a strategy.

- 15% of Slovenian SMEs and 49% of Austrian SMEs employ native speakers; 76% of Slovenian companies do not employ native speakers (as compared to 50% of Austrian SMEs) and 9% of Slovenian SMEs do not know whether they have employed native speakers (and slightly more than 1% of Austrian SMEs).

- Slightly less than one-fifth (19%) of Slovenian SMEs use local agents for their language needs; 70% of Slovenian SMEs do not use local agents and 11% of companies do not know whether they use local agents. On the other hand, more than half of Austrian SMEs (54.4%) use local agents for their language needs, 44% do not use them and 1.1% of Austrian SMEs do not know if they have ever used local agents.

- Professional translators and interpreters are used by only 10% of surveyed Slovenian SMEs and 33% of Austrian enterprises; 79% of Slovenian SMEs and 64% of Austrian SMEs do not use the services of professional translators and interpreters and 11% of Slovenian and 2% of Austrian SMEs do not know whether they use such services.

- Slightly more than one-third of Slovenian SMEs (34%) hire staff with language skills to match their foreign markets; slightly more than a half of them (52%) do not hire such staff and 14% of companies do not know whether such staff have been hired. Fifty percent of Austrian SMEs hire such staff, 46% do not hire such staff and almost 4% do not know whether such staff has been hired.

- As for the lost contracts due to the lack of foreign language skills, only 8% of Slovenian SMEs and an even smaller percentage of Austrian SMEs (slightly less than 7%) believe that they have lost contracts due to language barriers; slightly less than a third of Slovenian SMEs and 32% of Austrian SMEs think so.
SMES and 79% of Austrian SMES believe that they have not lost contracts due to the lack of language skills. Almost 62% of Slovenian and 14% of Austrian SMES do not know whether they have ever lost contracts because of the lack of language skills.

In Table 2 we present various LMSS employed by 16 Slovenian and 16 Austrian enterprises. In the surveyed sample, only 16 Slovenian SMES and 16 Austrian SMES had a formal LMS. Fifty per cent of Slovenian and 78% of Austrian SMES clearly stated that they did not have such a strategy. 31% of Slovenian and 4% of Austrian SMES were not sure whether their company has such a strategy.

- Twelve out of 16 Slovenian SMES believed that there is a correlation between having a language strategy and a company’s performance, four Slovenian SMES did not know if that was the case. As for the Austrian SMES, slightly less than 63% of enterprises see such a correlation. On the other hand, there are 13% of SMES in Austria that do not see such a correlation and 25% that do not know whether such a correlation exists.

- Of the 16 Slovenian SMES with an LMS only two had a formal language strategy contained in a written document, two did not know if such a document existed and 12 enterprises answered that they did not possess such a document. A total of 62.5% of Austrian SMES did not have a written document outlining their LMS, more than% did not know whether such a document existed and the remaining 31.3% said that they had a formal written document for their language strategy.

- The majority of Slovenian SMES (94%), but only 38% of Austrian

<table>
<thead>
<tr>
<th>Item</th>
<th>SLO</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruiting native speakers from your target markets</td>
<td>37</td>
<td>31</td>
</tr>
<tr>
<td>Appointing company employees who already possess language skills</td>
<td>87</td>
<td>81</td>
</tr>
<tr>
<td>Using professional translators and/or interpreters</td>
<td>56</td>
<td>31</td>
</tr>
<tr>
<td>Developing a language plan/strategy for handling communication barriers before you start exporting</td>
<td>37</td>
<td>19</td>
</tr>
<tr>
<td>Language training for staff</td>
<td>31</td>
<td>50</td>
</tr>
<tr>
<td>Cooperation with universities</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Multilingual websites</td>
<td>94</td>
<td>38</td>
</tr>
</tbody>
</table>
SMEs have a multilingual website. The second most important strategy for Slovenian SMEs is appointing people who already have language skills (87%), followed by the use of professional translators and interpreters (56%). The recruitment of native speakers from a company’s target markets and the development of a language plan or strategy prior to export activities to new markets is an approach shared by 37% of Slovenian SMEs, but only 21% of Austrian SMEs. Language training for staff is provided by 31% of Slovenian and slightly less than 50% of Austrian SMEs. Only one Slovenian and one Austrian SME mentioned cooperation with universities.

- Sixty-five per cent of surveyed Slovenian enterprises and only 43% of Austrian SMEs believed that English is not enough for their export activities, while 35% of Slovenian and almost 57% of Austrian SMEs still believed that English as a foreign language met all their communication needs with regard to exporting.

As seen from tables, there are some outliers. Slovenian SMEs believe that having multilingual websites is of utmost importance if they want to boost sales, which is why twice as many respondents from Slovenia reported that multilingual websites were a part of their language strategy. On the other hand, Austrian SMEs use professional translators and/or interpreters more often as their Slovenian counterparts do.

There is also a considerably higher percentage of Slovenian SMEs that used ‘I do not know’ as the answer. More than 60% of Slovenian respondents responded in this way to the last statement (‘Lost contracts due to the lack of language skills.’), and more than 50% did not know whether they use the services of translators and interpreters.

**Discussion**

Both Slovenian and Austrian small and medium-sized enterprises should actively encourage multilingualism, while at the same time broadening the choice of languages; businesses, both micro enterprises and multinational companies alike, should develop creative and dynamic language strategies, adapted to the individual possibilities of organizations. Language management approaches should include the recruitment of native speakers with language skills; company websites adapted to languages other than the national language; the use of translators and interpreters; and employers may find it useful to offer language training to their staff. Finally, schools should aim at boosting the number of people with a sec-
ond or third foreign language. High-quality language learning should be available for children from the age of five, with a goal that all students gain a good language qualification by the end of secondary school. In addition, the role of university language departments is enormous, both with regard to developing expertise in modern languages as well as when teaching languages for specific purposes (in language departments at faculties of economics, business and similar institutions). In tertiary education language learning and language teaching need to become more applied and practice-oriented, with more emphasis on conversational ability than full fluency. Students should be encouraged to spend a period of mobility in another European country. A lack of language skills may also have a negative impact on mobility in the job market.

In the future, the need for language skills is most likely to increase. According to the ELAN study carried out in 2006 (European Commission 2006), in slightly less than half of the countries surveyed, at least 50% of respondents believed they would need additional language skills in the next three years. Ten years after, raising language awareness is equally if not more important. Businesses should be encouraged to record, exploit and develop language skills available within their companies. They should find ways to provide language training for employees, provide work experience opportunities for foreign students and employees, make use of migrant workers’ language skills and seek opportunities to collaborate with educational institutions in order to support language education and training.

**Conclusion**

Our research confirmed that 65% of Slovenian and 43% of Austrian SMEs believed that English was not enough for satisfying every communication need. If individuals want to remain employable and companies open new markets and new business opportunities, they should embrace multilingualism. Despite the fact that English is the most studied language in the world, with about two billion learners projected in the next decade, and a preferred language for intra-company communication in many global companies as well as in medium-sized ones, not everyone speaks or wants to speak English. *The Language Guide for European Business* (2011) mentions a survey, which showed that languages other than English are used by more than a third of all companies and that four out of ten companies have experienced more or less serious communication problems with trade partners in other countries as a result of linguistic deficits. In
a similar vein, The Austrian Institut für Bildungsforschung der Wirtschaft published a report (Archan and Holzer 2006) projecting future language needs in Austria, stating that companies will need Italian, Czech, Slovak and Hungarian. Our research also showed that only a small percentage of Slovenian exporting enterprises employ LMS and that even fewer have their language strategy contained in a written document. Despite the fact that 73% of Slovenian and 77% of Austrian SMES believed that there was a link between the use of languages and export performance they rarely employ such a strategy.

The contribution of foreign languages to competitiveness is too obvious to be doubted. It may appear that English will keep its leading role as the world business language, but knowing other foreign languages may give individuals and enterprises a competitive edge. A lack of foreign language skills may not always lead to direct losses, but may dissuade enterprises from entering new markets. Sixty-five per cent of Slovenian and 43% of Austrian SMES were aware that English as a foreign language was not enough. On the other hand, only 8% of Slovenian and an even lower percentage (7%) of Austrian SMES said that they had lost a contract due to the lack of foreign language skills, while 62% of Slovenian and roughly 14% of Austrian SMES admitted that they did not know whether this had happened.

In summary, our recommendations for Slovenian and Austrian enterprises are the following: review your language needs in particular markets against the checklist provided above; take action to implement an LMS appropriate to your markets; evaluate the cost-effectiveness of the various language management techniques; network with other SMES, share resources, and good practices. Finally yet importantly, educational institutions should also be aware of the importance of their role as support service providers in the area of language training. Higher Education institutions (HEIs) should seek opportunities to make contact with local international SMES for knowledge exchange purposes and for the development of relevant services for local businesses. Both improved communication between HEI and businesses and the transfer of good practices can improve the situation and this has been emphasized by other authors (Babnik and Trunk Širca 2014; Distansont, Haapasalo and Vaananen 2014; Feria and Hidalgo 2011).

The ubiquity of documents produced by various institutions of the EU will not suffice in the absence of immediate action carried out by small and medium-sized enterprises. Many SMES are not aware of fund-
ing possibilities available within several community programmes; some regard application procedures as too cumbersome and time-consuming, others, micro enterprises and nascent enterprises, and simply lack funds to invest in language education or appropriate language management strategies. In the next decades, foreign language skills are going to become more important than ever, even for people whose mother tongue is English. We are thus likely to consider learning Mandarin, Arabic, Russian, and Spanish, Portuguese or Turkish or any other language spoken in the territory that is now considered an emerging market. Not only will this help businesses, it might also help enhance our ability to simply understand one another better, to increase our awareness of different cultures and ways of thinking (Kohonen et al. 2014), or even increase creativity and enhance our overall mental ability (Adesope et al. 2010).

In addition to the above-mentioned, it is important – because of the impact of LMSs on a company’s bottom line – to raise awareness among SMEs of the commercial value of using language strategies and to promote ideas leading to the increase in the volume of European SMEs implementing an LMS in trade. Companies unwilling to enhance their repertoire of foreign languages are at risk of becoming less competitive and incapable of operating in today’s globalized world. According to our research, only 30% of Slovenian SMEs (and 50% of Austrian SMEs) provide language training for their staff. In addition to face-to-face classroom-based language learning, companies should think about blended language learning (a combination of online and face-to-face learning) combined with guided self-study, as has been recommended in many previous studies (Albrecht 2006; Conrad 2002; Marquis 2004; Rižnar 2009).

Our research was limited to a small sample of Slovenian (79) and a slightly larger sample of Austrian SMEs (90). Future research could focus on one industry in a certain area. If the majority of Slovenian SMEs chosen were located in the Štajerska region (bordering to Austria) or in the Primorska region (bordering to Italy) the research results might be different. Similarly, if companies from only one industry were chosen, the research results may also differ from ours. Further research could thus concentrate on either one region or a single export-oriented industry.

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The Effect of Perceived Environmental Uncertainty on the Use and Perceived Usefulness of Strategic Management Accounting: Some Empirical Evidence

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The purpose of this paper is to investigate whether perceived environmental uncertainty (PEU) affects the use and the perceived usefulness of strategic management accounting (SMA). The study takes the perspective that SMA can be regarded as a set of strategically oriented management accounting techniques and makes the research hypothesis that as PEU increases the use and perceived usefulness of SMA techniques also increase. To test the hypothesis, the responses of 55 CFOs to a questionnaire survey were analysed. The survey considered a cross-section of large manufacturing companies in Italy. The regression-based analysis mainly shows: (1) a positive relationship between PEU and the use of strategic pricing as SMA technique supporting product pricing decisions; (2) a positive relationship between PEU and the use of balanced scorecard; (3) a positive association between PEU and the perceived usefulness of all the SMA techniques included in the study.

Key Words: management control, perceived environmental uncertainty, strategic management accounting

JEL Classification: M41

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Introduction

In accounting literature there is general consensus that perceived environmental uncertainty (PEU) is a fundamental contingency variable affecting management control systems design and use. In particular, PEU has been associated with the use and usefulness of broad scope management accounting (Chenhall 2003). The present study aims to investigate the relationship between PEU and strategic management account-
ing (SMA) as specific broad scope management accounting. SMA entails the preparation and provision of information to support the strategic decisions in organizations (Bhimani 2013). Information is needed at each stage of the strategic decision-making process (Invernizzi 2005), and, further, strategic decisions are affected by the managerial perceptions of the uncertainty related to the external environment (Tymon, Stout, and Shaw 1998).

The study takes the perspective that SMA can be viewed as a set of strategically oriented accounting techniques (Cadez and Guilding 2008) and considers various SMA techniques drawn from previous studies (Cinquini and Tenucci 2010). Traditional management accounting, which is mostly short-term, internally oriented, based on past financial results, and dealing with regular events, is inadequate for strategic decision-making. In contrast, SMA techniques exhibit environmental (outward-looking), and/or long-term (forward-looking) orientation (Guilding, Cravens, and Tayles 2000). SMA techniques may involve collection of information about competitors, taking advantage of cost reduction opportunities through value chain and cost drivers analysis, performance measurement systems that help translate strategy into objectives and measures (Lord 2007).

Despite there are a number of studies investigating the incidence and perceived merit of SMA practices in many Countries, further research is needed to explore the potential determinants of SMA adoption, and the development of a sound contingency framework for SMA is still in its initial stage (Cadez and Guilding 2008; Noordin et al. 2015).

This provides the motivation for this exploratory research, which makes the hypothesis that as PEU increases the use and perceived usefulness of SMA techniques increase to support more informed and accurate strategic decisions. As such, a congruence approach is followed as form of contingency fit, as the relationship between PEU and SMA techniques is analysed with no regard to firm performance (Gerdin and Greve 2004).

The study reports the findings of a questionnaire survey based on a sample of 55 large manufacturing firms from Italy. Based on prior literature (e.g. Gordon and Narayanan 1984), PEU is measured using the respondents’ perceptions about predictability and pressures of different environmental aspects. Moreover, respondents were asked whether they use SMA techniques and to indicate their usefulness for strategic decision-making.

The study seeks to make two connected contributions. First, it updates
previous results on the use and perceived usefulness of a set of management accounting techniques that are non-conventional and relatively recently conceived. Secondly, drawing on quantitative empirical data and focusing on PEU as contingent variable, it extends contingency-based hypotheses regarding SMA to increase knowledge on the antecedents of its use.

**Literature Review**

**PERCEIVED ENVIRONMENTAL UNCERTAINTY AND MANAGEMENT ACCOUNTING**

Environmental uncertainty is a fundamental concern that managers have to consider in the strategic decision process, with the purpose of adapting the organization’s activities to the environmental opportunities (Milliken 1987). Environmental uncertainty is generally referred to the changing conditions of the environment and their unfolding in an unpredictable way. It is driven by factors such as technological changes in manufacturing and operations, process innovations, actions of competitors, customers’ needs and preferences, relations with suppliers, market demand, macroeconomic and industry trends, government policies, and deregulation and globalization issues (Hoque 2005).

Different authors have argued that the perceptions of environmental uncertainty, rather than actual uncertainty, influence managerial decision-making (Gul and Chia 1994). PEU refers to managers’ inability to accurately predict the external environment of the organization (Tymon, Stout, and Shaw 1998). In particular, Milliken (1987) describes three types of PEU. The first is state uncertainty, generally meaning that managers are not able to predict how factors of the environment might be changing. Secondly, effect uncertainty refers to the inability to predict the impact of environmental events or changes on the organization. Third, response uncertainty is depicted as the inability to predict the likely consequences of a response to the events. Hence, PEU results in a lack of information about external environment that affects strategic decisions.

Generally, PEU makes managerial planning and control more difficult (Chenhall and Morris 1986). Uncertainty impacts on strategic planning, budgeting and performance evaluation processes, as in unstable and changing environments it is more difficult to attain reliable financial and market forecasts and ex-ante target setting due to unpredictability of future events. In addition, PEU affects organizational structure, whose
design should enable to respond more effectively to the environmental
demands, also through more open and externally focused management
control systems (Chenhall 2003).

However, PEU can nevertheless be reduced by the attainment of more
information, which can alleviate the difficulties in planning and control
(Chenhall and Morris 1986). With this purpose, the information process-
ing capabilities of firms should be consistent with the uncertainty per-
ceived in the environment. Many accounting studies have explored the
relationship between PEU and management accounting following a con-
tingency approach (Otley 2016). Specifically, PEU, as contextual variable,
has been associated with the use and usefulness of broad scope manage-
ment accounting. Broad scope management accounting, as opposed to
narrow scope, generally provide information regarding internal and ex-
ternal environment, is historical and future-oriented, quantitative and
qualitative, and includes financial and non-financial measures (Chong
and Chong 1997).

Different contingency-based researches suggested that under condi-
tions of high PEU, the use of sophisticated broad scope reports could
reduce uncertainty and support more informed managerial decision-
making. For example, Gordon and Narayanan (1984) showed that in-
creased PEU is positively associated with the perceived importance of ex-
ternal, non-financial and ex-ante information. Gul and Chia (1994) found
a significant positive relationship between the use of broad scope man-
agement accounting information and higher performance under condi-
tions of high PEU, and Agbejule (2005) also showed that the higher the
level of PEU, the more broad scope management accounting is beneficial
to performance.

**STRATEGIC MANAGEMENT ACCOUNTING: AN OVERVIEW**

Management accounting involves providing information to managers,
and management accounting practices are developed to satisfy the infor-
mation needs for planning and control purposes (Noreen, Brewer, and
Garrison 2011). This could incorporate an array of information needs
from operational to strategic (Pitcher 2015). However, traditional (con-
ventional) management accounting collects data and evidence to com-
pose timely reports that inform management decisions at the opera-
tional level. Further, traditional management accounting practices, such
as budgets, variance analysis, cost accounting, and performance mea-
sures such as ROI, mainly focus on routine and internal concerns and
have short-term financial orientation (Chenhall and Langfield-Smith 1998).

Because of the primary focus on internal aspects (inward-looking) and on past results (backward-looking), Lord (2007) claims that the use of traditional management accounting for strategic decision-making raises problems. In fact, strategic decisions are usually long-term, involve several internal and external variables, are non-routine and made under uncertainty about the future.

In this light, SMA is a form of management accounting entailing the preparation and presentation of information for strategic decision-making, placing special emphasis on external (environmental) factors and forward-looking (future-oriented) concerns (Bhimani 2013). SMA can be viewed as broad scope management accounting and deviates from traditional (conventional) management accounting in many characteristics, which literature has discussed (Coad 1996; Lord 2007).

Despite several authors have noted that the boundaries of SMA are still unclear (Carlsson-Wall, Kraus, and Lind 2015), SMA serves the purpose of performing a range of activities revolving around strategic decision-making, such as environmental analysis, strategic alternatives generation and selection, strategic plan implementation and the consequent controls (Brouthers and Roozen 1999). Generally, in increasingly dynamic environments the provision of strategically relevant information can be fundamental to the key stages of the strategic management process (Nixon and Burns 2012).

In SMA literature three major strands can be identified (Langfield-Smith 2008). A first body of literature comprises conceptual models for SMA, for example Simmonds (1981), Bromwich (1990), Shank and Govindarajan (1993), and Ward (1992).

A second research strand has generated insights through theoretically grounded case studies, such as Lord (1996), Roslender and Hart (2003), Tillmann and Goddard (2008), and Carlsson-Wall, Kraus, and Lind (2015).

A third strand includes surveys of practice addressing SMA adoption and implementation. Survey-based studies have especially investigated the use and the perceptions of SMA techniques merit, describing the state of the art in individual countries (Guilding and McManus 2002; Noordin, Zainuddin, and Tayles 2009) or through cross-country comparisons (Guilding, Cravens, and Tayles 2000; Cadez and Guilding 2007). Some surveys have also concentrated on the relationship between strat-
egy and SMA (Bhimani and Langfield-Smith 2007; Cinquini and Tenucci 2010; Cescon, Costantini, and Grassetti 2016), with mixed results. Further, Cadez and Guilding (2008) have proposed a contingency framework for SMA, showing that the use of SMA techniques can be affected by different factors (various strategy-related facets and company size), and that SMA, in turn, has a beneficial mediating effect on firm performance.

This study adds to the strand of survey-based research, introducing PEU as a factor that may affect SMA use. In particular, it follows a congruence approach as it assumes a relationship between PEU (as contextual variable) and SMA (as structure variable) without investigating whether this relationship influences performance (Gerdin and Greve 2004).

Further, as highlighted by Cadez and Guilding (2008), literature suggests that two perspectives on SMA may be taken. First, SMA can be conceived as a set of accounting techniques allowing the collection and analysis of information for strategic decision-making. Secondly, SMA is concerned with the participation of accountants in strategic decision-making processes. The present study takes the former perspective and, in particular, considers ten SMA techniques: life cycle costing, quality costing, target costing, value chain costing, strategic pricing, competitor position monitoring, competitor cost assessment, competitor appraisal based on published financial statements, brand valuation, and balanced scorecard. They are mainly drawn from Guilding, Cravens, and Tayles (2000) and Cinquini and Tenucci (2010), who provided an exhaustive explanation of each technique.

Development of Hypotheses

Brouthers and Roozen (1999) developed and presented a SMA framework in which different information requirements were derived for different levels of environmental uncertainty. For example, they emphasized that in repetitive and stable environment the content of information should be mostly internal and quantitative, with an historic focus, while in changing environments, characterized by higher levels of uncertainty, strategic decision-making and planning implementation should be assisted by the provision of information that is internal and external, quantitative and qualitative, focused on present and future.

Gul (1991) suggest that when PEU is high, managers would need non-traditional and more advanced management accounting information (such as economic and non-economic information external to the firm), to cope with the uncertainty and make decisions that are more appro-
appropriate. Cescon (2010) found that firms perceiving high \( \text{PEU} \) tend to use innovative costing techniques, such as target costing and life cycle costing, for strategic purposes. Chong and Chong (1997) examined the role of management accounting on the linkages between strategy and \( \text{PEU} \) on strategic business unit (SBU) performance and argued that firms perceiving more environmental uncertainty put greater reliance on using external, non-financial and future-oriented information. These studies appear to draw attention to a positive association between accounting information usage and \( \text{PEU} \). According to the main objective of this study, it is also important to recognize the SMA’s role in providing managers with incremental information not generated by a conventional accounting information system (Kalkhouran et al. 2015). These aspects can be summarized with the following hypothesis:

**H1A** \( \text{PEU} \) and the use of SMA techniques are positively associated.

As regards the possible association between \( \text{PEU} \) and the perceived usefulness of SMA techniques, two researches are particularly significant as they address the relationship between \( \text{PEU} \) and the perceived usefulness of strategically oriented management accounting techniques. Gordon and Narayanan (1984) found that as \( \text{PEU} \) increases, managers consider external, non-financial and ex-ante (forward-looking) information to be increasingly important. In a similar vein, Chenhall and Morris (1986) emphasized that \( \text{PEU} \) positively influences the extent to which managers perceive broad scope information as useful. As noted by Fisher (1995), the ultimate goal of management accounting system should be to support the decision-making process by providing top managers with a comprehensive information set that includes both conventional and strategically oriented accounting information. Furthermore, Lal and Hassel (1998) find that the usefulness of strategy driven management accounting could be even better explained when the interactions between \( \text{PEU} \) and cognitive style of top managers are considered. A sound balance between the conventional and strategically oriented uses of accounting information is fundamental to cope with a wide range of contingency variables and therefore SMA techniques appears of primary importance for the successful management of \( \text{PEU} \). Consistent with this movement from traditional accounting information to a more multidimensional information system, the following hypothesis can be proposed:

**H1B** \( \text{PEU} \) and the perceived usefulness of SMA techniques are positively associated.
Research Method

Sample

The data used in this study were collected through a questionnaire-based survey. An initial sample comprised 223 large manufacturing firms (with annual sales exceeding 100 million Euros). Firms were randomly chosen from the dataset provided by the Italian Chambers of Commerce (CCIAA). In a first stage of the survey, letters were sent to the Chief Executive Officers of the 223 firms to illustrate the research topics and objectives and invite to participate. Overall, 74 companies accepted to respond to the questionnaire. In a second stage, these 74 firms were sent an e-mail containing a link to access the web questionnaire and general instructions. Fifty-five complete and usable questionnaires were received, which represents a response rate of 24.7%. The respondents were mainly Chief Financial Officers (CFOs).

To investigate for possible non-response bias, a Chi-Square test was carried out to detect for potential differences in the industrial sector distribution between firms that completed the questionnaire and those that did not respond. No significant differences were found ($p = 0.63$), suggesting the absence of biases.

Variables Measurement

Perceived Environmental Uncertainty

PEU was measured using eight items adapted from Gordon and Narayanan (1984) and Hoque (2005). Respondents were asked to indicate their perception, on a seven-point Likert scale ranging from 1 (very low) to 7 (very high), about the uncertainty regarding various aspects of their firm’s environment (table 1).

The reliability of the scale was measured by determining the Cronbach alpha coefficient (Cronbach 1951). This was equal to 0.69, indicating moderate internal consistency of the items that can be accepted for exploratory research (Robinson, Shaver, and Wrightsman 1991; Hair et al. 2010).

This result enables the calculation of a total score of the perceived uncertainty for each firm (Sullivan and Artino 2013). Following Lal and Hassel (1998), total score was calculated as the sum of the item scores and it is used as independent variable in the regression analyses to test the hypotheses.

Table 1 provides descriptive statistics of the environmental uncertainty
Table 1: Descriptive Statistics of the Environmental Uncertainty Items

<table>
<thead>
<tr>
<th>Item</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in the macroeconomy and in the sector</td>
<td>5.64</td>
<td>1.17</td>
<td>6</td>
<td>5-7</td>
</tr>
<tr>
<td>Competitors’ actions</td>
<td>5.13</td>
<td>1.40</td>
<td>5</td>
<td>5-6</td>
</tr>
<tr>
<td>Introduction of new products by competitors</td>
<td>4.93</td>
<td>1.41</td>
<td>5</td>
<td>4-6</td>
</tr>
<tr>
<td>Consumer demands and preferences</td>
<td>4.67</td>
<td>1.35</td>
<td>5</td>
<td>4-6</td>
</tr>
<tr>
<td>Manufacturing technologies</td>
<td>4.55</td>
<td>1.78</td>
<td>5</td>
<td>3-6</td>
</tr>
<tr>
<td>Change in the customers power</td>
<td>4.40</td>
<td>1.38</td>
<td>4</td>
<td>4-5</td>
</tr>
<tr>
<td>Government regulation and policies</td>
<td>4.18</td>
<td>1.67</td>
<td>4</td>
<td>3-5</td>
</tr>
<tr>
<td>Suppliers’ actions</td>
<td>3.53</td>
<td>1.17</td>
<td>3</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Notes: Column headings are as follows: (1) mean, (2) standard deviation, (3) median, (4) IQR.

items. The table includes central tendency measures of the degree of perceived uncertainty for each item, such as mean and median, and variability measures, such as standard deviation and interquartile range (IQR). The items are presented in decreasing order based on mean perceived uncertainty.

Use and Usefulness of Strategic Management Accounting Techniques

The survey requested firms to indicate whether they use SMA techniques to support the strategic decision process. The techniques were selected based on previous studies (Guilding, Cravens, and Tayles 2000; Cinquini and Tenucci 2010), as outlined in the overview of SMA, and itemized in the questionnaire. A brief description of the techniques was included in a glossary delivered with the questionnaire to help a homogeneous understanding.

For data analysis purposes, the use of each SMA technique is represented through a binary variable (Y) where a value of 1 was attached to firms that declared using SMA techniques (‘users’) and a value of 0 to firms that did not (‘non-users’).

Then, following the same approach of prior studies (Guilding, Cravens, and Tayles 2000) firms were asked to indicate the perceived usefulness of each SMA technique on a seven-point Likert scale ranging from 1 (very low) to 7 (crucial). For data analysis purposes, the perceived usefulness of SMA techniques is represented through a variable measured on an ordinal level assuming values from 1 to 7. The study employs logistic regression to investigate the hypothesized relationships.
Table 2 displays the counts of firms using the different SMA techniques and the usage rates (in percentage). The techniques are presented in decreasing order according to usage rates, and ranks are reported in the first column. These results are quite consistent with previous studies (Guilding, Cravens, and Tayles 2000; Cinquini and Tenucci 2010) as regards the widespread use of competitor position monitoring and the lower use of costing techniques. Further, a high use of balanced scorecard is found. This differs from the results of Cadez and Guilding (2007) focused on Slovenia and Australia, where the use of balanced scorecard ranges from moderate to low, and those of Cinquini and Tenucci (2010), which reveal a low degree of use of integrated performance measurement systems across a sample of Italian manufacturing firms.

Table 3 exhibits an overview of the descriptive statistics regarding the degree of perceived usefulness for each SMA technique. Both measures of central tendency, such as mean and median, and measures of variability, such as standard deviation and IQR, are reported.

Analysis and Results

Table 2 SMA Techniques Usage Rates

<table>
<thead>
<tr>
<th>SMA Techniques</th>
<th>Users</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor position monitoring</td>
<td>45</td>
<td>81.8</td>
</tr>
<tr>
<td>2 Balanced scorecard</td>
<td>37</td>
<td>67.3</td>
</tr>
<tr>
<td>3 Brand valuation</td>
<td>35</td>
<td>63.6</td>
</tr>
<tr>
<td>4 Strategic pricing</td>
<td>32</td>
<td>58.2</td>
</tr>
<tr>
<td>5 Competitor appraisal based on published financial statements</td>
<td>28</td>
<td>50.9</td>
</tr>
<tr>
<td>6 Target costing</td>
<td>27</td>
<td>49.1</td>
</tr>
<tr>
<td>7 Competitor cost assessment</td>
<td>20</td>
<td>36.4</td>
</tr>
<tr>
<td>8 Value chain costing</td>
<td>19</td>
<td>34.5</td>
</tr>
<tr>
<td>9 Quality costing</td>
<td>18</td>
<td>32.7</td>
</tr>
<tr>
<td>10 Life cycle costing</td>
<td>14</td>
<td>25.4</td>
</tr>
</tbody>
</table>

Notes  n = 55.
The Effect of Perceived Environmental Uncertainty ...

Table 3 Descriptive Statistics of the Perceived Usefulness for Each SMA Technique

<table>
<thead>
<tr>
<th>SMA techniques</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Strategic pricing</td>
<td>5.73</td>
<td>1.34</td>
<td>6</td>
<td>5~7</td>
</tr>
<tr>
<td>2 Competitor position monitoring</td>
<td>5.56</td>
<td>1.62</td>
<td>6</td>
<td>5~7</td>
</tr>
<tr>
<td>3 Balanced scorecard</td>
<td>5.35</td>
<td>1.54</td>
<td>6</td>
<td>5~7</td>
</tr>
<tr>
<td>4 Value chain costing</td>
<td>5.04</td>
<td>1.46</td>
<td>5</td>
<td>4~6</td>
</tr>
<tr>
<td>5 Target costing</td>
<td>4.93</td>
<td>1.45</td>
<td>5</td>
<td>4~6</td>
</tr>
<tr>
<td>6 Brand valuation</td>
<td>4.75</td>
<td>1.66</td>
<td>5</td>
<td>4~6</td>
</tr>
<tr>
<td>7 Competitor appraisal based on published financial statements</td>
<td>4.64</td>
<td>1.46</td>
<td>5</td>
<td>4~6</td>
</tr>
<tr>
<td>8 Quality costing</td>
<td>4.60</td>
<td>1.54</td>
<td>5</td>
<td>4~6</td>
</tr>
<tr>
<td>9 Competitor cost assessment</td>
<td>4.55</td>
<td>1.40</td>
<td>5</td>
<td>4~5</td>
</tr>
<tr>
<td>10 Lifecycle costing</td>
<td>4.29</td>
<td>1.83</td>
<td>5</td>
<td>2.5~6</td>
</tr>
</tbody>
</table>

Notes Column headings are as follows: (1) mean, (2) standard deviation, (3) median, (4) IQR.

The relationship between perceived environmental uncertainty and the use of SMA techniques

H1a was tested carrying out a logistic regression analysis for each SMA technique. Logistic regression for a binary response variable \( Y \) and an explanatory variable \( X \) is based on the following linear relationship (Agresti 2002):

\[
\text{logit} [\pi(x)] = \log \frac{\pi(x)}{1 - \pi(x)} = \alpha + \beta X,
\]

where \( \pi(x) = P(Y = 1 | X = x) \) is the probability of using a certain SMA technique \( Y \) and is expressed as a function of environmental uncertainty \( X \). \( X \), which is the explanatory variable, is calculated as the total score of the environmental uncertainty items \( x \). Finally, \( \alpha \) is the constant of the model.

To support H1a, the coefficient \( \beta \) in the regression equation should be significantly positive. This would indicate that the probability to use a certain SMA technique increases as PEU increases.

The results of logistic regressions are shown in table 4.
The regression results show significantly positive coefficients for strategic pricing ($\beta = 0.136$, $p = 0.014$) and balanced scorecard ($\beta = 0.115$, $p = 0.033$), while the use of the other SMA techniques is not influenced by the degree of PEU. Therefore, $H_{1A}$ is partially supported.

As goodness-of-fit measures, the proportion of correctly classified observations was calculated to evaluate the prediction ability of each logistic regression (Dong et al. 2011). This proportion ranges from 0.491 to 0.818, with an average of 0.655, indicating an acceptable performance of regression models.

As suggested by Simmonds (1982), product price changes may induce competitive reactions, which, in turn, may have large effects on the competitive positions of firms. These effects are not easy to predict accurately. To tackle this uncertainty, strategic pricing entails that data used in making pricing decisions, where product costs provide the point of departure, should be complemented with information on likely competitor reactions to changes in pricing policy. When price is viewed as a key element in strategic positioning, other factors that should be appraised in pricing decisions are the expected volume of sales, estimation of volume changes, projected market share, and other factors deriving from competitively oriented analysis. This outlook is ultimately manifested in strategic pricing (Guilding, Cravens, and Tayles 2000). The regression result shows
that, in surveyed firms, strategic pricing is used in response to high PEU.

Balanced scorecard integrates short-term financial measures with a set of non-financial leading indicators of future, long-term performance, embracing four perspectives: financial, customer, internal business, and innovation and learning (Kaplan and Norton 1992). In this study, the result regarding the use of balanced scorecard is consistent with the view that when firms experience greater difficulty in predicting future events, they should use more management accounting information, with greater reliance on non-financial indicators for performance evaluation (Hoque 2004).

The relationship between perceived environmental uncertainty and the perceived usefulness of SMA techniques

H1B was tested carrying out an ordinal logistic regression analysis for each SMA technique. Ordinal logistic regression is based on the following model for an ordinal response variable with \( j \) (more than two) categories and a single predictor (Agresti 2002):

\[
\text{logit}[P(Y \leq j|X = x)] = \alpha + \beta X,
\]

where \( j \) goes from 1 to the number of categories minus 1. Here, \( Y \) is the perceived usefulness of a certain SMA technique, which can assume values \( (j) \) in the interval 1–7, while \( X \) is the explanatory variable calculated as the total score \( (x) \) of the environmental uncertainty items. \( \alpha \) is the constant of the model.

To support H1B, the coefficient \( \beta \) in the regression equation should be significantly positive. This would indicate that the probability that a certain SMA technique is perceived as more useful increases as PEU increases. Table 5 shows the results of ordinal regressions.

Significant and positive coefficients are found for the whole set of SMA technique considered, either at 5% or 1% significance level, indicating that for sampled firms perceived usefulness of SMA techniques would be an increasing function of PEU. These results provide support for H1B.

Again, the proportion of correctly classified observations was computed to evaluate the prediction ability of each ordinal regression. This proportion ranges from 0.236 to 0.418, with an average of 0.335.

The regression results seem to suggest that, under conditions of high PEU, managers participating in strategic decision-making judge SMA techniques as more useful to collect and analyse information about en-
TABLE 5  The Relationship between **PEU** and the Usefulness of **SMA** Techniques

<table>
<thead>
<tr>
<th>SMA techniques</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life cycle costing</td>
<td>0.125</td>
<td>3.197</td>
<td>0.002**</td>
</tr>
<tr>
<td>Quality costing</td>
<td>0.088</td>
<td>2.421</td>
<td>0.019*</td>
</tr>
<tr>
<td>Target costing</td>
<td>0.125</td>
<td>2.795</td>
<td>0.007**</td>
</tr>
<tr>
<td>Value chain costing</td>
<td>0.090</td>
<td>2.230</td>
<td>0.030*</td>
</tr>
<tr>
<td>Strategic pricing</td>
<td>0.149</td>
<td>3.662</td>
<td>0.002**</td>
</tr>
<tr>
<td>Brand valuation</td>
<td>0.090</td>
<td>2.409</td>
<td>0.020*</td>
</tr>
<tr>
<td>Competitor position monitoring</td>
<td>0.133</td>
<td>2.905</td>
<td>0.006**</td>
</tr>
<tr>
<td>Competitor cost assessment</td>
<td>0.142</td>
<td>3.145</td>
<td>0.003**</td>
</tr>
<tr>
<td>Competitor appraisal based on published financial statements</td>
<td>0.107</td>
<td>2.788</td>
<td>0.008**</td>
</tr>
<tr>
<td>Balanced scorecard</td>
<td>0.162</td>
<td>3.669</td>
<td>0.001**</td>
</tr>
</tbody>
</table>

**Notes**  Column headings are as follows: (1) coefficient (β), (2) z statistic, (3) p-value.  * Significant at the 0.05 level. ** Significant at the 0.01 level. Independent variable: environmental uncertainty items total score.

Environmental or future concerns. This is consistent with the evidence, provided in previous studies, that the degree of perceived uncertainty is positively associated with the perceived usefulness of non-conventional management accounting information (Lal and Hassel 1998; Hoque 2005).

**Discussion and Conclusions**

The present study has sought to provide some insight on the relationship between **PEU** and **SMA** as specific broad scope and non-conventional management accounting system that aligns accounting with strategic management (Nixon and Burns 2012). Following a congruence approach (Gerdin and Greve 2004), it aims to contribute to the emerging body of literature on the antecedents of **SMA** adoption, addressing the suggestion for further research advanced in literature. In particular, the study adds knowledge by introducing **PEU** as a contextual variable in **SMA** framework and empirically testing the hypothesis that as **PEU** increases the use and perceived usefulness of **SMA** techniques increase to support strategic decisions. In doing so, the study extends the examination of innovative management practices within contemporary settings (Cadez and Guilding 2008).

Based on a sample of 55 large manufacturing firms in Italy, the regression-based statistical analysis performed to test the research hypotheses...
mainly shows: (a) that for large manufacturing firms included in the sample, **PEU** influences the use of specific **SMA** techniques, such as strategic pricing and the balanced scorecard; (b) a positive association between **PEU** and the perceived usefulness of all **SMA** techniques included in the study. This suggests that when managers perceive situations of high environmental uncertainty they tend to regard **SMA** techniques as more useful but without increasing their adoption within organization. That is, based on the perceptions of the benefits that could derive from the greater use of such techniques, managers recognize the importance of a wide range of **SMA** techniques but their employment within firm is still limited. Indeed, the responses of **CFOs** are quite consistent with the view, advanced in prior literature, that non-conventional management accounting, such as **SMA**, can be useful to cope with environmental uncertainties and make more informed and accurate strategic decisions. However, it has to be noted that while **PEU** affects the perceived usefulness of all **SMA** techniques, firms seem to be selective in the use of **SMA** techniques to tackle uncertainty in strategic decisions. This selective behaviour seems to be motivated by two different considerations. The first one is that the implementation of **SMA** techniques is extremely expensive, because it requires the adoption of an analytical and sophisticated information system (Inghirami 2017). The second one is that managers hardly understand the meaning of **SMA** concept. The prominent academic emphasis on the **SMA** concept and the paucity of empirical research make **SMA** concept very difficult to understand. Furthermore, the usage rate of **SMA** techniques is still limited, as reported by several empirical studies (Langfield-Smith 2008). Then, a paucity of knowledge and culture within firms concerning the importance of these non-conventional accounting techniques is empirically demonstrated. This suggests that deeper investigation is needed to understand the relationship between strategic decisions and the use of **SMA** as a package. Since strategic decisions differ, the design and use of **SMA** should be tailored to meet different contingency variables and, then, different information needs.

These conclusions are subject to the study’s limitations. The main limitation regards the number of the sampled firms, which reflects its exploratory nature. Although these firms were randomly selected, to increase the validity of the results and to help determine the extent to which they can be generalized, the hypotheses need to be tested on a larger sample.

Another limit regards the operationalization of **SMA** techniques usage.
The use of a dichotomous scale creates measurement error, as with this approach minor use in one firm equals extensive use in another firm. However, a purpose of this study, which is exploratory in nature, has been to identify firms that use or do not use a certain SMA technique. Future development of the research would investigate the extent to which each SMA technique is used.

Further, the study focuses on a relationship between one independent variable (PEU) and one dependent variable (each SMA technique), whereas it may be ‘essential to understand the interactions between multiple contingent and control factors in determining the effectiveness of control system design’ (Otley 2016, 48). Additional research could be conducted to follow this recommendation, since it is likely that other factors, together with the degree of PEU, are influencing the adoption and use of SMA techniques.

References


Managing Global Transitions


Lal, M., and L. Hassel. 1998. ‘The Joint Impact of Environmental Uncertainty and Tolerance of Ambiguity on Top Managers’ Perceptions of...


This paper is published under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) License (http://creativecommons.org/licenses/by-nc-nd/4.0/).
The purpose of this article is to identify the most important factors with impact on civil servants' motivation. The factors affecting motivation are examined and their effects on job satisfaction are explained. In order to achieve the aforementioned objective of the research, we will employ the Maslow-Herzberg combined model. The study was conducted in 21 Town Halls from the Iasi County, Romania. Pearson's correlation and regression analyses were used to establish whether the selected motivational factors were related to civil servants' job satisfaction. The civil servants who feel that they are important for their organization will pursue goals actively and will increase the efforts to be more competitive at work and perform better. The limits of our research depend on the organizations analysed. The framework provides an explanation of why some factors enhance the civil servants' motivation, while others not so much.

**Key Words:** motivation, intrinsic/extrinsic factors, job satisfaction, civil servants, Maslow-Herzberg model

**JEL Classification:** M12, H83

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### Introduction

To understand how an organization works, managers often address a series of questions about human behaviour: What makes a person act one way or another? Why do some people cease to be someone the organization needs? Are there any particular reasons that sometimes trigger different attitudes and behaviours? (Micle and Saucan 2009). The above-mentioned questions must be the reason for an action or the cause of an action or determination. The reason is actually that the cause of action is often inducing an action whose outcome is motivation. Etymologically speaking, the term motivation is rooted in the Latin *movere* that means
to set in motion, move. Usually, the term refers to stating the reasons required to direct the body to meet the behaviour, and therefore remove it. The literature defines motivation as ‘the sum of forces (both internal and external) leading human behaviour to achieve a certain goal and then determine concern for other needs’ (Prodan 2006). Motivation is defined as ‘action taken to achieve a goal, in the presence of a stimulus – known or not’ (Clegg and Birch 2002).

In the narrow sense, motivation is ‘the interdependence of the needs, aspirations and interests of staff within an organization and the fulfilment of the objectives, tasks and responsibilities within an organization’ (Nicolescu and Verboncu 2007).

Broadly speaking, motivation is ‘the result of decisions and actions taken by the whole staff of an organization to contribute (directly or indirectly) to the realization of functionality and superior performance, based on the correlation interests in achieving the organization’s objectives’ (Gellerman 1963).

The main aspect of motivation is that it determines the action. The essence of motivation is to identify ways in which employees (with varying needs and personalities) can be encouraged to participate as effective as they are able in achieving the objectives. Motivating employees to achieve the best results is determined by a combination of factors that can be grouped into:

- internal factors/individual, as attitudes, needs, interests, value systems, perceptions of tasks;
- external factors/organizational, such as payment system, incentive system, specifying tasks, control system, feedback.

These two sets of factors interact, resulting in the staff behaviour at workplace.

Summarizing, we can say that motivation: it is understandable (understanding how different components of motivation are working is essential to determine and influence the motivation of staff); it is a process (a series of steps/stages lead to motivation, the lack of a step results in the failure of the process); it is a long-term problem (requires continuous monitoring, diagnosing and error correction); it is logical (the underlying principles are logical and understandable); it could be managed (this follows from the previous feature); it is working (they can choose what is working, the effort for each task and the time allocated to this effort); it means collaboration (between the organization and employee: the orga-
nization provides payment and benefits in return for the time and energy of the employees); it could be maximized (using intrinsic or extrinsic motivational factors, as well as increasing the action of factors with positive impact and adjusting the negative impact of others). The feedback value is well-known (Steelman and Rutkowski 2004) and has a direct effect on motivating employees and reinforcing their behaviour. The importance of feedback on job performance is confirmed by a series of studies (Kluger and DeNisi 1996).

Recent studies (Andrews 2016) show motivation as a part of the wave of administrative reforms inspired in the New Public Management Model (NPM) (Pollit and Bouckaert 2011), namely the Public Service Motivation (PSM). PSM has been one of the concepts peculiar to the field of public administration (Perry and Vandenabeele 2015), which swung back to public values, which, once again, is seen as the moving force within the public organizations (O’Flynn 2007). PSM is characterized as a reliance on intrinsic rewards (e.g. a sense of accomplishment, reputation for serving public interest, or duty of a public employee) over extrinsic rewards (e.g., a pay rise, opportunity for advancement, or job security) (Park and Rainey 2007). PSM expresses a preference for ‘helping others’, ‘benefiting society’ or ‘engaging in an interesting public service’ (Steijn 2008).

Correlated with the PSM theory is the self-determination theory (SDT), one of the leading motivation theories in the field of social psychology, which states that all the humans need to satisfy three basic psychological needs: autonomy, competence and relatedness (Ryan and Deci 2000). Correlating these assumptions on motivation in public administration, the literature (Andrews 2016) reveals that there are two basic strategies: controlled motivation, sustained by the putative efficacy of external means to regulate public servants’ behaviour, leading to the reward and punishment approach, and self-motivation, which can emerge from an individual’s set of values and from the satisfaction of the three basic psychological needs (Ryan and Deci 2000).

Background of the Issue: Motivational Factors and Job Satisfaction

In public administration, motivation has become an important issue (Behn 1995) even though, for a long time, the accent was on motivation of employees from the private sector (Kanfer 1994). In the case of the private sector management, the research of motivation and job satisfaction are common issues; as such, in the public administration sector
the research is based on the theories and knowledge offered by the private sector. The theories applied in the private sector are not correlated all the time with the public administration practices, so we should apply and test these theoretical frameworks with care. The literature suggests that the civil servants are less motivated by private sector incentives, like payment and promotion (Wittmer 1991). Some studies reflected that the intrinsic motivators are more related to the motivation and PSM, while the extrinsic work motivators are either not related to PSM or are related to a lesser extent.

Although the circulated idea that motivation and employee satisfaction are directly proportional to the proper functioning and performance of the organization (Micle and Saucan 2009), there is no unanimous agreement on these two concepts (due to the complexity of the two concepts). Job satisfaction represents the projection of the extent to which an individual is positively oriented toward his or her job (Cramer 1996). In literature, job satisfaction can be seen as containing three components: an affective component, a cognitive component and a behavioural component (Jex 2002).

Subsequently, there are highlighted some approaches of the issue:

- Motivation and satisfaction are two independent phenomena (Geller-man 1963). In this sense, motivation is an influence that causes the individual to act in a certain way; the action would not have occurred if there were no influence. On the other hand, satisfaction is the event originating in a subjective feeling of pleasure that can be described or expressed by the individual, but cannot be seen from the outside. Events may produce the effect of satisfaction when we do not change the behaviour, or may lead to motivation – when the behaviour changes.

- The relationship between motivation and satisfaction is perceived unilaterally (Aubert 2003). According to this perspective, motivation is the force impulse, whose aim is to achieve satisfaction. Only motivation can influence satisfaction and not vice versa. There is a relationship between motivation and satisfaction. Satisfaction is determined indirectly by reward. In this respect, there were a few statements: satisfaction/dissatisfaction is an indicator of effective operation/ineffective motivation; satisfaction and motivation have double capacity – cause and effect; motivation is the cause and the effect of satisfaction.
A synthetic model of the relationship between motivation and job performance could be explained through a link in several steps among motivation, performance and job satisfaction: the value of reward (tangible and intangible) provided by the organization and the perceived probability of being rewarded as expected determine the effort (primarily the extent and quality of the motivation); the effort supports skills, abilities and attitudes, and the achievement of performance; the quality of the obtained reward and the perception of fairness, in their turn, will influence the effort that will be made and also, the structure of motivation; as such, it is starting a new motivational loop.

The literature considers that satisfaction is an indicator of motivation, not a cause. People can be satisfied without being motivated (Aubert 2003). The relationship between the performance and the working staff’s motivation is that the performance depends on work environment (working conditions); staff skills (talent, skill, experience); motivation to perform a certain thing.

Job satisfaction focuses on the responses of employees to their experiences at the workplace and, from a psychological perspective, job satisfaction is a positive emotional state resulting from an assessment made by the workers about their work at the present moment (Riba and Ballart 2016). Public employees were reported to be particularly pleased when their work helped other individuals or contributed to the greater good.

**Characteristics of Romanian Civil Servants’ Motivation**

Addressing civil servants’ motivation derives from the interest you show in them. In public administration, the effort of civil servants is oriented towards satisfying the public interest, so, in this regard, they are able to make an effort for people and hence derive job satisfaction from fulfilling their proactive motivation oriented to the needs of society. It was confirmed that the motivation of civil servants affects job satisfaction and job performance if the perceived link between individual motivation and the work environment is tight (Wright and Pandey 2008). The relationship between motivation and job satisfaction in public administration depends on an experienced comparability between individual needs and motivation to serve the public interest and the environment of their job/organizations which is akin to results found in scientific research (Bright 2008; Wright and Pandey 2008). Competitiveness and the performance at work should be rewarded accordingly. Trying to explain human behaviour in the organization, many researchers have concluded
that it is extremely difficult as there are numerous explicit or less explicit factors that determine the motivation and satisfaction at work. An ensemble of motivational factors described in the previous paragraphs can highlight the importance of knowing the impulses, forces, aspirations, the needs that determine an individual action, as far as explaining their behaviour.

Motivation at work of civil servants/employees in the public administration sector (we consider civil servant an employee in an institution/public authority subject to the regulations in force under the Romanian Civil Service Regulations, Law no. 188/1999 with subsequent amendments introduced by Law no. 161/2003 on measures to ensure transparency in the exercise of public dignities, public functions and business environment, the prevention and punishment of corruption) is determined by the internal and external factors that are exert on them and lead to positive or negative actions in performing work tasks.

The Romanian public officers have the tasks to find the best way to motivate their employees, considering the law provisions and rules. They decide the proper forms of motivation to stimulate initiative, creativity and performance of the civil servants. Successful completion of missions largely depends on government forces that determine the action in motivating the civil servants. One of the main causes for failures of administrative system in Romania is the scarcity of personnel policy. Personnel policy does not stimulate enough the officials. They are tempted to perform tasks at an acceptable level. These manners of incentives lead to lower quality of public services. The provisions refer to the motivational factors in term of granting a higher salary, advancement on the post or function, promoting a system of performance indicators.

Quantifying the quality of activities in the public administration is difficult. Civil servants receive financial rights in relation to working hours. The question is how to make differentiation in relation to the quality of work. Classes’ salary for each position and function cannot meet all the requirements of reality. To prevent the mobility, the various forms of incentives are wage increases; annual awards in the form of bonuses to be distributed among public officials (to create a climate conducive to teamwork, collaboration and mutual control); advancing in the post or function. Promoting a system of performance indicators is a recent step in the personnel policy of the administrative system in Romania. The performance indicators have a dual role: to stimulate the officials to obtain the best results and to allow an evaluation of each result.
There are several methods to assess a civil servant:

- the coordinator (there is an alternative assessment that consists of completing two reports – one, by the coordinator, and the second, a self-assessment form, by the civil servant. The results imply a negotiation process to establish the final score of the evaluation process;
- of peer (through collective analysis and evaluation, the consequences are more easily accepted for promotion and salary increases).

The evaluation is important to career development, making training plans, motivating employees and creating an atmosphere conducive to performance. If it is defective, tensions can arise within the team and may ultimately lead to decrease in performance. Annual assessment should not be a description but an analysis of performance objectives and personal traits. Using questionnaires can increase the accuracy of the analysis. Typically, these assessments are made once a year.

In accordance with Law no. 188/1999 on the status of civil servants and GD no. 611/2008 on the development of civil servants’ career, the assessment of civil servants is conducted in order to correlate the objective of the work of civil servants and public service requirements, to achieve an objective appraisal of individual professional performance of public officials by comparing the achievement of individual goals set by the actual results, providing a motivational system to increase individual professional performance, identifying training needs of civil servants to improve the results of the work in order to achieve objectives. The evaluation results in the promotion of civil servants in a permanent or temporary function, depending on the grade and salary advancement. Evaluation of the public servant is based on an essay prepared by the supervisor, an internship report prepared by junior civil servant and the evaluation report prepared by the evaluator. Evaluation criteria of civil servants are: knowledge of industry-specific regulations; knowledge of the principles of public administration; capacity to fulfil their duties; adaptability and flexibility in carrying these out; reasoning and the ability to make a rational choice between a number of possible options; communication, ease of transmission of ideas, both written and verbal; conduct on the job. The importance of assessment of civil servants lies in the fact that the quantification of results can reveal whether their work is in line with organizational goals, and the work performance, as well as whether the human resource is professionally compliant with the position they occupy. It is a major concern for the current government to find all the factors shaping
human behaviour by focusing on completing an efficient work. In this regard, the motivation and job satisfaction becomes the issues to be developed by the researchers and the findings should be presented to the public administration decision makers.

**Research Methodology**

**THE STATE OF KNOWLEDGE IN THE FIELD**

Researches on employee motivation include approaches that consider this process as essential to organizational behaviour. The need for understanding and explaining organizational behaviours’ motivation stems from the consequences it has on all aspects of human life. Human resource is one of the most important assets of an organization. In other words, the success of an organization in achieving its objectives largely depends on the performance of its employees. It is therefore important to focus on factors affecting employee’s performance. The literature has a great extent of studying the role of reward and merits recognition programs to motivate and satisfy employees (Nadeem, Majed, and Adnan 2011). The results obtained from analysis of data collected through questionnaires distributed among respondents indicate that there is a positive relationship between rewards and recognition programs and employee motivation and satisfaction. This study found that employees are not motivated solely by money and employee behaviour is linked to their attitude.

Hawthorne Studies began the human relations approach to management, whereby the needs and motivation of employees become the primary concern of managers. Research has shown that when employees feel supported by their organization will return to support the behaviours preferred by the organization. Keirsey (1998) argue that what motivates people is appreciation. A motivated employee is one who feels appreciated. Most people will spend more time (after work and on weekends) to work without payment, and often working harder than they do in their job, to do something that will be appreciated. If an employee feels appreciated already, a bonus or incentive is an ideal way to prove that it is appreciated.

There are a number of competing ideas about what motivates workers. Most of these ideas focus on the types of rewards offered to employees at the workplace and, in particular, intrinsic versus extrinsic benefits. Intrinsic rewards are those that come from performing the work itself.
These may include, among others, the feeling of success, learning abilities, the results of work completed. On the other hand, extrinsic rewards are accompanying the work, as direct part of it. The most common are the financial compensation and benefits such as health insurance and paid time off.

Many modern theories of employee motivation emphasizes that intrinsic rewards are essential to the process of reasoning, while extrinsic rewards are often regarded as necessary, but not sufficient. Intrinsically motivated behaviour is neither a reward, nor a task itself. Reward and recognition programs approach extrinsic motivational behaviour. Other studies reflect the relationship between motivation at work and performance being positively correlated with organizational identification, task performance and contextual performance (Knippenberg 2000).

**PURPOSE, OBJECTIVES AND RESEARCH HYPOTHESES**

The research purposes revolve around determining the motivating factors among civil servants in the twenty-one Town Halls from the Iasi County (a major city with outstanding academic tradition since 1865, situated in the Eastern part of Romania) and to identify their effects on job satisfaction. The aim is to identify those mechanisms motivating and demotivating among employees of the organizations analysed. This will be achieved by identifying the current level of motivation of civil servants and by identifying their needs and wishes. In addition, research will contain a number of solutions and proposals to increase the current level of motivation of civil servants.

The research is based on the following general question: What are the factors underlying the motivation of employees in the twenty-one Town Halls from Iasi County and in what proportion?

Based on the theory presented in the first part, the main objective in conducting the research is revealing the motivating factor for civil servants in the twenty-one Town Halls in Iasi County, given Maslow-Herzberg combined model, as follows: extrinsic factors (primary needs, hygienic factors) as working conditions, safety/stability of employment, labour organization, material rewards and intrinsic factors (higher needs/motivators): feasibility, recognition, ability to learn new things, the work itself, the responsibilities, interpersonal relationships (with colleagues and superiors).

The specific objectives formulated to achieve the research are 01. Obtaining relevant information on intrinsic motivational factors that char-
acterize the work of civil servants; 02. Determination of extrinsic motivational factors that characterize the work of civil servants; 03. Identifying and selecting the most effective motivators for civil servants and explain results; 04. Identifying new motivators factors for use in subsequent reasoning strategies.

The research hypotheses are formulated as follows:

**H1** The civil servants which are mainly motivated by the intrinsic factors will be more satisfied with their work

**H1.1** The civil servants are motivated by the responsibility and autonomy in post, comfort at work, the prospect of advancement, professional development, the attractiveness of work performed, recognition, the ability to learn new things, the work itself, the responsibilities, interpersonal relationships.

**H2** The civil servants are motivated by the extrinsic factors.

**H2.1** The main motivators factors for civil servants are working conditions, safety and stability of employment, salary and authority.

**CONDUCTING RESEARCH**

The study was carried out through a cross-sectional, questionnaire-based survey. Data collection was conducted between 30 August 2015 and 30 November 2015 through self-administered questionnaires (person to person or by email) for employees, required to express themselves fully, concerning what they do, and the way they do it. The method/tool used is the survey research and the research instrument is the questionnaire of opinion, employed because it is a useful tool, available to all and relatively less expensive. However, it should be noted that the use of opinion questionnaire is possible only if the expressed opinions and the actual behaviour are in a consistent relationship, which is the limit of our research. In terms of methodology, the questionnaire included 25 closed questions as follows: simple questions (dichotomous), simple questions (trichotomy) – with answers to yes/no/so-so; questions that require a unique choice of subjects from a set of proposed alternatives; questions that require a multiple choice of several possible variants. The questionnaire begins with a series of simple questions, while general difficult questions (sensitive) are placed among these, in order not to tire/bore respondents and not to risk abandonment or random answering, base. At the end of the questionnaire there are questions designed to shape the socio-economic profile of respondents. Random sampling is simple. The selection was arbitrary.
(convenience samples); the sample was composed of individuals chosen arbitrarily. The sample was based on the specific formula applied to the population of 197 employees of public organizations analysed as follows:

\[ n = t^2 \times p \times \frac{1-p}{e^2}, \]  

(1)

where \( n \) is the sample size, \( t \) is the accepted theoretical probability (1.96), \( p \) is the percentage of the population has the feature sampling (0.5), and \( e \) is the error of representativeness permissible limit (0.05).

Therefore,

\[ n = 1.96^2 \times 0.5 \times \frac{1-0.5}{0.05^2}, \]  

(2)

where \( n = 3.8416 \times 0.5 \times 0.5 \div 0.0025 = 1.9208 \times 200 = n = 384.16. \)

After applying this formula, the sample is obtained, corrected for total population size, as follows:

\[ n_1 = \frac{n}{1+(n-1)/N}, \]  

(3)

where \( n_1 \) is corrected sample size and \( N \) is total population considered (number of employees in analysed organizations in 2015, i.e. 197).

So: \( n_1 = 384.16 \div (1 + 383.16 \div 197) = 384.16 \div (1 + 1.9500) = 130.489. \)

Therefore, for a population of 197 employees of organizations analysed, a maximum permissible error of 5% and a confidence interval of 95%, the sample size is 130 people (where 69.23% are women and 30.77% are men). Data processing was performed using SPSS 19.0 software, which ensures accuracy of results.

**Analysis and Interpretation of Data**

Each individual has a unique motivational profile with values, concepts, prejudices, and different ideas about what is reasonable. The analysis of recorded data from the application questionnaires revealed a number of positive aspects, but also some negative aspects about motivating employees in the organizations analysed.

After analysing the data, the profile of the average respondent is: originates mainly from rural areas; is feminine (69.23%); is between 24 and 60; has higher education and gross income of between 1500 and 2500 RON; working into organization about 5 years; holds an executive position for 3 years.

Considering the extrinsic motivational factors, all the 130 respondents said that they have the necessary equipment (logistic, administrative, and
managerial) to perform their duties. However, a significant percentage, 73.1% say that they feel better at work, while 25.3% say that there is too much noise at the workplace, and 0.8% stated that there are too many people in a space too small. The work environment in the company is regarded as pleasant by 77.7% of respondents, while 22.3% of them considered it unpleasant. Thus, 28.5% are very satisfied with their current job, 45.4% are somewhat satisfied, while 26.1% are unhappy with the location-addressed. Workplace stability is a very important factor for 72.3% of respondents. In addition, 18.5% consider it an important factor, and only 9.2% said 'so and so'.

52.3% of civil servants met the organizational goals for the next year, while the rest, 47.7% do not know. We consider this result as worrisome, as the knowledge of the one’s organization’s objectives is essential.

Respondents’ opinion on the material reward offered (or not) within organizations is analysed as follows: 72.3% of respondents considered transparent the salary system of the organizations analysed, 36.9% considered it advantageous; 45.4% are satisfied with the current level of wages, 25.4% responded 'so and so', while 29.20% are not satisfied with the salary received. In this regard, 23.1% of respondents say they are paid according to the effort, 40.8% say they are paid correctly, while 36.2% believe that they should receive more money.

Considering intrinsic motivational factors, 25.4% of respondents believe in their chances of promotion, while 74.6% believe that these opportunities do not exist. Half of the respondents believe that their work is appreciated, while 71.5% stating that their work benefits visibility and 28.5% that the results fail to appear. Respondents’ opinion about the opportunity to learn new things show that 62.3% believe that they do not have the opportunity to learn new things, while 37.7% believe that there are such opportunities. Civil servants from the analysed organizations consider that working within the organization is particularly interesting (33.8%), while 28.5% see it is as less demanding, furthermore, 25.5% state that it is challenging, and 12.3% consider themselves overloaded. However, the staff believes that the occupied position offers the opportunity to use their skills properly (43.1% said yes and 30.8% answered partially true, the remaining 26.2% disagreeing with this statement). To make a first step towards identifying an initial list of positive aspects about doing the job, respondents were asked to answer affirmatively or negatively to a series of statements. The analysis revealed that responses were positive following: 9.2% of respondents say they are trying to extend the breaks as
much as possible; 80% of employees with analysis tasks know what they have achieved; all 130 subjects state that they respect deadlines, follow the given instructions, and never say *I have no time*.

The analysis revealed, however, some negative aspects, such as 64.6% of respondents perform overtime; only 11.5% are required to express their ideas; only a 38.5% believe that their views are heard in the company. Civil servants’ opinion on the responsibilities they have within the organization in carrying out their work registered as follows: 29.2% believe that there is a satisfactory level, 77.7% state that what they do is important to the organization. In addition, all 130 respondents are liable if wrong.

When asked how they are working with colleagues/peers, the respondents considered 100% of they well trained, while 71.5% considered them competent. The same is true when it comes to the relationship with the boss, which is characterized by respondents as a fair man when giving praise or criticism (by 93.1% of them), which makes good decisions often (86.2%) which clearly assigns tasks (80%) and closely monitors their performance (76.2%), he/she considers employees at their fair value (75.4%), he/she trust in employees (73.8%) and he/she defers to them (66.9%). Only 11.2% believe that their boss does not know what is happening in the organization. Thus, they benefit from salary increases periodically based on seniority, receive performance bonuses, advancement (only 80.8% consider that this incentive exists), or a short training. The reasons that determine the staff of the organizations analysed to work harder are a greater appreciation from the hierarchic superior; a greater interest from colleagues; a pleasant workplace environment in the company; a delegation of authority and greater autonomy. In addition, when asked what displeases them, the employees assert that the most disturbing are the salary for 50% of them; the conditions, for 47.7%; the attitude of superiors, for 38.5%; incompatibility with job requirements, for 25.4%; the attitude of colleagues, for 24.6%; the organization level, for 18.5%. Respondents stated that they would like to have a special merit award (46.9%), to receive respect for employees (35.4%), the birthday celebration of employees (34.6%), the superior to see them as a person, not an employed (31.5%), peer relationships (20%) and respect between employees (22.3%).

Data analysis (table 1) was performed using the command Analyse → Descriptive. Therefore, the most important factor for the functioning of the organizations analysed is job stability, the average gaining 4.63. Next, in order, authority, responsibility and autonomy in post (4.06), comfort at work (4.02), the prospect of advancement (3.55), benefits package (3.49),
table 1  Descriptive Statistics: The Importance of Motivational Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job stability</td>
<td>130</td>
<td>3</td>
<td>5</td>
<td>4.63</td>
<td>0.649</td>
</tr>
<tr>
<td>Salary</td>
<td>130</td>
<td>2</td>
<td>5</td>
<td>3.25</td>
<td>0.791</td>
</tr>
<tr>
<td>The prospect of advancement</td>
<td>130</td>
<td>1</td>
<td>5</td>
<td>3.55</td>
<td>1.028</td>
</tr>
<tr>
<td>Attractive package of benefits</td>
<td>130</td>
<td>1</td>
<td>5</td>
<td>3.49</td>
<td>1.058</td>
</tr>
<tr>
<td>Ensure appropriate logistical support</td>
<td>130</td>
<td>1</td>
<td>5</td>
<td>2.43</td>
<td>1.251</td>
</tr>
<tr>
<td>Premiums, bonuses</td>
<td>130</td>
<td>1</td>
<td>5</td>
<td>2.91</td>
<td>1.527</td>
</tr>
<tr>
<td>Attractiveness of work performed</td>
<td>130</td>
<td>1</td>
<td>5</td>
<td>3.26</td>
<td>1.279</td>
</tr>
<tr>
<td>Professional Development</td>
<td>130</td>
<td>1</td>
<td>5</td>
<td>3.32</td>
<td>1.148</td>
</tr>
<tr>
<td>Comfort at work</td>
<td>130</td>
<td>3</td>
<td>5</td>
<td>4.02</td>
<td>0.726</td>
</tr>
<tr>
<td>Authority, responsibility and autonomy in post</td>
<td>130</td>
<td>3</td>
<td>5</td>
<td>4.06</td>
<td>0.723</td>
</tr>
</tbody>
</table>

Notes  Column headings are as follows: (1) N, (2) minimum, (3) maximum, (4) mean, (5) standard deviation. Valid N (listwise) = 130.

professional development (3.32), the attractiveness of work performed (3.26), salary (3.25), the bonuses (2.91), ensuring proper logistics transport (2.43).

Validation of Assumptions

For validation or invalidation of hypothesis proposed, we used the command Analyse → Descriptive → Cross-Tabs (table 2). The cross-tabulation aim is to show the relationship (or lack thereof) between two variables. The cells of the table show the number of cases for each combination of common values. For example, for four people attractive salary and work performed are very important factors in personal motivation. In addition, for answers from ‘very important’, factor attractiveness of work performed are barely visible that it increases with the increasing importance of factor salary.

However, although it seems that the two variables are related, is there any reason to believe that these results are not random? In order to determine whether the relationship between the two variables is significant the Chi square test was used, which has the advantage that it is suitable for almost any type of data (table 3).

The first row of the table, Pearson Chi-Square tests the hypothesis that the variables attractiveness of work performed and salary are independent. The value of significance (asymptotic) is providing the information requested. Thus, the lower value is, the more unlikely that the two variables...
The Empirical Research on Civil Servants’ Motivation

Table 2: Importance of Factors Salary vs. Attractiveness of Work Performed: Cross Tabulation

<table>
<thead>
<tr>
<th>Factor</th>
<th>Attractiveness of work performed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Salary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>(a)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>28.6%</td>
</tr>
<tr>
<td>(3)</td>
<td>(a)</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>12.0%</td>
</tr>
<tr>
<td>(4)</td>
<td>(a)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>21.1%</td>
</tr>
<tr>
<td>(5)</td>
<td>(a)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>21.4%</td>
</tr>
<tr>
<td>Total</td>
<td>(a)</td>
<td>21</td>
</tr>
</tbody>
</table>

Notes: Column/row headings are as follows: (1) not important, (2) less important, (3) so and so, (4) important, (4) very important, (a) count, (b) percentage within salary.

Table 3: Salary vs. Attractiveness of Work Performed: Chi Square

<table>
<thead>
<tr>
<th>Item</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>8.953a</td>
<td>12</td>
<td>0.707</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>10.788</td>
<td>12</td>
<td>0.547</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.160</td>
<td>1</td>
<td>0.282</td>
</tr>
</tbody>
</table>

Notes: Column headings are as follows: (1) value, (2) degrees of freedom, (3) asymptotic significance (2-sided). a 13 cells (65.0%) have expected count less than 5; the minimum expected count is 0.86. N of valid cases = 130.

are independent. Therefore, the value of significance is 0.707, so, we can affirm that the two variables are independent, between salary and attractiveness of work performed is a relationship of interdependence.

Underlying the process of motivating civil servants of the organizations analysed is mainly for intrinsic nature and constituted the first research hypothesis (H1). The amount of media provided by extrinsic factors respondent is 16.71, as opposed to intrinsic factor, which are 18.21. Therefore, the hypothesis H1 and the subsequent H1.2 are confirmed, the civil servants from the analysed organizations have been more satisfied by the responsibility and autonomy in post, comfort at work, the prospect of advancement, professional development, the attractiveness of work performed, recognition, the ability to learn new things, work itself, the responsibilities, interpersonal relationships.
The hypothesis $h_2$ and the subsequent $h_{2.1}$ which consider that the main motivators factor for civil servants are mainly the extrinsic factors is partially confirmed. Analysing the data obtained it can be seen that the salary ranks eight in importance in motivating employees, with an average of 3.25. Therefore, the civil servants consider the job stability as the most important motivator. Working conditions are the motivating factor for the functioning of the organizations analysed. This factor has obtained an average of 4.2 in terms of importance. Responses of subjects revealed that 73.1% feel well at work, while 25.3% say that the work is too much noise, and 0.8% that are too many people into a very small space. Meanwhile, the majority (77.7%) considers the atmosphere as a pleasant in organization.

**Conclusions**

Human resource is one of the most important assets of an organization. In other words, the success of an organization in achieving its objectives largely depends on the performance of its employees. It is therefore important to focus on factors affecting employee's performance. The study results revealed that the intrinsic factors are prioritized by the employees of the analysed organizations. Employees who feel valued by their organization will actively pursue the goals of the organization, the job involvement will increase, absenteeism will be reduced, and there will be less fluctuation at the workplace, facts evidenced by the results obtained in the study conducted.

Civil servants are motivated mainly by job stability. If we consider the extremely fragile labour market today, the result appears to be quite normal and expected. Next, in order, line the following motivators: authority, responsibility and autonomy on the job, workplace comfort, perspective advancement, benefits package, professional development, and attractive work performed wages, premiums and bonuses, providing logistic transport accordingly. The demotivating factors were highlighted, in order: performance overtime (64.6% of respondents perform overtime, however, only 11.5% required express hours to work overtime). This has serious consequences for employees who may feel tired, as the yield decreases also for the experienced employees; also, only 38.5% of civil servants believe that their views are heard in the company. This demotivates employees, since they may come to believe that they are not important for the organization, their work is not important, and therefore their satisfaction may decrease.
Analysing the results of the study it can be concluded that the motivation of employees in organizations is considered high, but the management level of organizations should pay particular importance to factors declared unsatisfactory for employees and try to improve, increasing the level of motivation of employees. These findings are sustained by the previous studies (Bercu 2009), which reflect the importance of motivation at work as one of the determinants of the professional career of civil servants.

Therefore, a number of recommendations are drawn: a special policymaking concerning employee motivation, based on studies on their mood, the factors that it activates and the most effective ways to stimulate them. A first step has been achieved by conducting this study, the management is already having an insight into what motivates and demotivates employees; a clear exposure of the organization’s objectives and reasons. In most cases, the lack of information leads to failure to meet the employee’s job expectations and to employee demotivation. It is essential to explain to the employees which are the company’s objectives to be achieved and why; to attain the people’s involvement in finding solutions.

The study has a special value because it is the first research conducted in the analysed organizations and motivation can be a first step in detecting certain weaknesses that affect the job satisfaction. We conclude by reiterating the wish that human resource managers in the analysed organizations should review the study, since the motivation of human resources is a major issue for an organization.

The research has its limitations due to the specific context in which we test our hypothesis (public organizations/town halls from the Eastern part of Romania) and the results reflect the main motivators factors intrinsic and extrinsic and the relationships with the job satisfaction only for the employees from these organizations. The impact of work motivation on job satisfaction has a major importance for the human resource managers, practitioners, academicians and all the people interested in the field. Our findings could be also replicated in other organizations, regarding with another important factors that may be involved.

References


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Inovativne storitve spodbujajo gospodarski rast in strukturni spremembe s spodbujanjem razvoja novih sektorjev ter z izboljšanjem produktivnosti v obstoječih sektorjih. Sektorji, ki temeljijo na virih, so glavni dejavniki gospodarske proizvodnje severozahodne provincije Južne Afrike. Ta članek prikazuje, kako lahko takšna regija uporabi industrijske grozde in osredotočeno promocijo izvoza kot strategijo za izboljšanje inovacij na področju storitev. V omenjeni pokrajini so bili s pomočjo analize strukturne poti in moči vlečnih metod opredeljeni štirje grozdi storitev. Vzorec izbire izvoznega trga se uporablja za opredeljene industrijske grozde storitev, s čimer se želi razkriti realne izvozne priložnosti, povezane z vsakim grozdom. Nazadnje se uporabijo trgovinski multiplikatorji za prikaz koristi, ki nastane zaradi povečanja izvoza grozdov. Oblikovalci strategij lahko omenjene rezultate uporabijo za obveščanje o ukrepih, ki bi lahko pomagali pri razvoju teh grozdov za storitve, ki bi okrepite konkurenčno prednost province ter raznolikost proizvodnje.

**Ključne besede:** inovacije storitev, industrijski grozdi, promocija izvoza, trgovinski multiplikatorji, **trade-dsm**

**Klasifikacija JEL:** R110, F140


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**Komunikacije in dejavnosti uporabnikov spletnih mest za socialne spletne strani: primere Nemčije, Poljske in Rusije**

Małgorzata Bartosik-Purgat, Oxana Filipchuk in Michael B. Hinner

Rast interneta močno vpliva na vsakodnevno življenje ljudi, še posebej z razvojem spletnih mest, kot so socialne spletne strani (sns), ki od svojega nastanka dalje beležijo vse večje število uporabnikov. Glavni namen tega prispevka je prepoznati pomen sns v povezavi z dvema dejavnostima posameznih uporabnikov: komunikacijo in vedenjem potrošnikov. Študija se osredotoča na tri najbolj priljubljena sns v treh sosednjih državah (Nemčija, Poljska in Rusija), in sicer na Facebook, v kontakte in YouTube. Metodološki pristop je dveh vrst: prvič, avtorji so razvili teoretično ozadje področij uporabe sns in oblikovali raziskovalna vprašanja; drugič, uporabili so metode **PAPI** in **CAWI** za analizo


Ključne besede: komunikacija, vedenje potrošnikov, Facebook, v kontaktte, YouTube
Klasifikacija JEL: M31, M37

Strategije upravljanja jezikov v avstrijskih in slovenskih MSP-jih
Igor Rižnar in Robert Rybnicek

Glede na študijo ELAN in precejšen del prejšnjih raziskav se zaradi po
manjkanja jezikovnih spremnosti v EU izgubi precejšen del poslovanja. V članku analiziramo, kako avstrijska in mala in srednje velika podjetja (MSP) sprejemajo strategije upravljanja z jezikom (LMS). Z vprašal
nikom, poslanim slovenskim in avstrijskim malim in srednje velikim podjetjem, raziskujemo, če se zavedajo ugotovitev ELAN-a, kakšne jezikovne strategije so sprejeli in ali je angleško znanje dovolj za uspešno poslovanje na svetovnih trgih. Ugotovitve kažejo, da se slovenska izvozna MSP ne zavedajo prednosti, ki bi jih strategija upravljanja jezikov lahko prinesla poslovanju na tujih trgih. Nasprotno pa avstrijska izvozna MSP pogosteje zagotavljajo jezikovno usposabljanje za svoje osebje, zaposlujejo domače govorce, veliko pogosteje uporabljajo lokalne posrednike za svoje jezikovne potrebe ter skoraj trikrat pogosteje uporabljajo storitve strokovnih prevajalcev in tolmačev.

Ključne besede: študija ELAN, znanje tujih jezikov, strategija upravljanja jezika, MSP
Klasifikacija JEL: L1, Z13

Učinek zaznane okoljske negotovosti na uporabo in zaznavno uporabnost strateškega računovodstva: nekaj empiričnih dokazov
Antonio Costantini in Filippo Zanin

Namen tega članka je raziskati ali zaznana okoljska negotovost (PEU) vpliva na uporabo in zaznavno uporabnost strateškega računovodskega vođenja (SMA). Perspektivna študije je, da lahko SRM štejemo kot nabor strateško usmerjenih tehnik vođenja računovodstva in narediti raz
iskovalno hipotezo, da ko se poveča uporaba SRM se poveča tudi za
znavna sposobnost tehnik SRV. Da bi to hipotezo preizkusili, je bilo

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analiziranih 55 odgovorov CFO-jev na anketo. Raziskava je preučila presek velikih proizvodnih podjetij v Italiji. Analiza na podlagi regresije prikaže: (1) pozitivno razmerje med PEU in uporabo strateških cen kot SMA tehnik, ki podpira odločitve o določanju cen izdelkov; (2) pozitivno razmerje med PEU in uporabo uravnoteženega kazalnika; (3) pozitivno povezavo med PEU in zaznano uporabnost vseh tehnik SMA katere so vključene v študio.

Ključne besede: upravljalni nadzor, zaznana okoljska negotovost, strateško vodenje računovodstva
Klasifikacija JEL: M.41

Empirična raziskava motivacije javnih uslužbencev: dokazi iz Romunije
Ana-Maria Bercu and Mihaela Onofrei


Ključne besede: motivacija, bistveni/zunanji dejavniki, zadovoljstvo pri delu, javni uslužbenci, model Maslow-Herzberg
Klasifikacija JEL: M12, H83
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