

LO-C 30Report

Role of Languages in International performance for UK SMEs

(Management findings of the research)

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Executive Summary

The study is a unique comprehensive country-level empirical study that examines the organisational level language capacity (LO-C)¹ and its drivers. LO-C refers to both motivation and preparedness (attitude) towards developing language related capabilities as well as (behaviour) actual utilisation of the language capabilities within the organisation. This study identifies the impact of LO-C on UK Small & Medium Sized Enterprises (SMEs) international performance indicators such as Export Orientation², Export sales, Export Profit and Export sales growth. In this study SMEs are defined as firms with less than 250 employees (European Commission,2008) and UK SMEs which were independent business unit i.e. which were not part of any large/MNCs were included. The gathering of self-reported primary data was facilitated by a web -based questionnaire survey sent to SMEs across the UK. To facilitate the questionnaire and identification of variables, the study also involved a preliminary study which comprised of semi-structured interviews with eight (8) key decision makers within SMEs; CEO's and Managing Directors of SMEs in the Midlands. Data from 415 completed surveys was obtained from SMEs, ranging in size from less than 10 employees to 250 employees, across different sectors {(manufacturing (28%), information technology (14%), finance (8%), automotive (4%), retail (25%) and other (21%)}.

“SMEs embracing language capabilities are 30% more successful in exporting than those which do not”

¹ LO-C refers to motivation as well utilisation of language capabilities within the organisation. Refer to Glossary.

² Please refer to Glossary

In fact, the study not only tries to understand the impact of language capacity (LO-C)¹ on organisation export performance, but it also identifies key drivers that facilitate of LO-C within an SME. The key drivers identified are Language competencies, Cultural intelligence, Willingness to invest (in translation services for example) and Training for languages and Technological awareness³ and its relative importance on LO-C. The research identifies Training and Willingness to Invest as the two most important drivers which facilitate LO-C within the organisation while language capabilities and/or cultural awareness are the necessary for LO-C. Furthermore, LO-C has a direct positive relationship with Export Orientation, Value Based Selling, Export Sales and Export Sales Growth. We also identify size, industry/sector, age of the firm (in years), exporting experience and number of countries exporting markets as control variables.

Performance Indicators

Our subjective performance indicators such as Export Orientation and Value- based Selling (VBSCC) are highly corelated with Export Sales, Export Profit and Export Sales Growth and similarly the former are highly corelated with language capacity (LO-C). Infact, deeper look at the data (Regression Analysis)⁴ suggested that LO-C has significant impact on not only Export Orientation and Value based selling (VBSCC) but also Export sales, export profit and sales growth. For our sample data of 415 responses, regression coefficient which is a numerical value of predictor variable and in our case, language capacity (LO-C) is 0.594 on Export Orientation and is 0. 585 on Value based selling (VBSCC)⁵. Furthermore, regression coefficient of Language

³ Please refer Glossary

⁴ Please refer Glossary

⁵ Coefficient of determination (adjusted R²) which measures explanatory power of the model is 0.461 for Export orientation and 0.475 for Value based selling.

capacity (LO-C) is 0.296 on Export sales, 0.346 and 0.328 on Export profit and export sales growth respectively⁶. Regression coefficient represents the amount of change in the outcome (predicted) variable for a one-unit change in independent (predictor) variable. In short, LO-C has a consequential positive impact on export orientation, value -based selling, export sales, growth and profits and clearly indicate SMEs embracing language capabilities are 30% more successful in exporting than those which do not.

Relevance of key drivers

When identifying the role of language capacity (LO-C) as impacting export performance indicators, it is paramount to understand of what language capacity comprises or, in other words, the key factors that are important for LO-C to exist within an SME. These factors are defined as key drivers. Through a rigorous process of literature review, data collection and analysis, five (5) key drivers have been identified namely Language Competencies, Cultural Intelligence, Willingness to invest and Training for Languages and Technological Awareness.

Multiple regression analysis further helps us understand the relative importance of each of these drivers on LO-C. With the dataset of 415 responses, Linguistic Competence has 0.210, Cultural Intelligence 0.227, Willingness to Invest 0.275, Training 0.349, and Tech Awareness 0.065 as regression coefficients which indicates relative importance of each driver on language capacity (LO-C)⁷.

⁶ Coefficient of determination (adjusted R²) is 0.114, 0.126 and 0.119 for Export sales, Export profit and export sales growth respectively.

⁷ Coefficient of determination (adjusted R²) which measures explanatory power of the model is 0.787 (ranges between 0 to 1). For definition refer Glossary.

Introduction: Research Rationale, Objectives and Methodology

Small & medium enterprise (SMEs) play a crucial role in the economy. Research show they represent private sector businesses and are integral to job creation (almost 60%). At the start of 2020 there were 5.94 million small businesses (with 0 to 49 employees), 99.3% of total business. SMEs account for 99.9% of the business population (6.0 million businesses), three fifths of employment and around half of turnover in the UK private sector. Total employment in SMEs was 16.8 million (61% of the total), whilst turnover was estimated at £2.3 trillion (52%). Employment in small businesses (with 0 to 49 employees) was 13.3 million (48% of the total), with a turnover of £1.6 trillion (36%) (BIS, 2020).

Another study by Centre for Economics and Business Research (CEBR) indicate SMEs contribution to the UK economy was at £202billion in 2016 which is predicted to increase to £241billion by 2025, a 19% increase over a 10 -year period. This clearly demonstrates the vital contribution of SMEs to the UK economy. Research also suggests that around 75-80% of SMEs in UK close within ten years (Wright et.al, 2015) of commencement due to lack of growth. One way to generate growth is to export products and/or services to international markets. Over the last 30 years academic studies have identified the strong link between exports and growth in the UK. Internationalisation is becoming critically important for business survival and growth (Lu and Beamish, 2001 and Webster and Deshpande, 1989) and often requires knowledge of the languages and culture.

In the realm of international business, culture and languages have been described as one of the important and 'distinct' factors for business performance (Johanson & Vahlne, 1977, p.23-32). Various studies have been conducted to understand cultural values in the past e.g. Schwartz & Bilsky 1987, Trompenaars 1993, Hofstede Model 2001, Hofstede & Hofstede 2005, Hofstede 2007 and GLOBE model 2004 in international business. However, language competencies in an organisation is conflated, implicitly embedded within culture and not recognised as a separate factor from culture (Kassis, 2005). It is also dispassionately addressed as a barrier/hindrance to be managed (Piekkari & Zander, 2005). Much of the research in the field has focused on multinational co-operations as part of an overall international strategy and no study/research

investigates how language competencies at an organisational level can facilitate the internationalisation for SMEs. It is, in this context, that with PhD. research at Aston University⁸ was envisioned to identify and examine the organisational level language capacity (LO-C) and its drivers, in order to understand the impact of LO-C on the international performance indicators.

Research Strategy and Source of data

To the best of our knowledge, prior research has not developed a measurement scale for language capacity within an organisation. In order to develop the scale, a systematic approach was utilised for the development of a conceptually relevant and psychometrically sound measurement tool (Churchill, 1979; Devellis, 1991; Netemeyer et al.,2003); ie applying a two stage multi-item scale development approach, as proposed by Rosenzweig and Roth (2007) and Menor and Roth (2007), was utilised. The scale helps us measure and understand motivation to utilise language competencies (defined as individual linguistic competence) but also degree of utilization of LO-C within the organisation.

In Stage 1 of the study, a literature review and semi-structured interviews were conducted to facilitate the questionnaire (survey) and identification of variables. The questions were open ended, where the main objective was to understand, expand and identify the concepts of languages/language competencies available in extant literature of relevance to SMEs in the UK. We were also interested in obtaining the views/validation of the SMEs themselves, as the focus of current literature is on Multi-national corporations (MNCs). Interviews were conducted with owners/managers of SMEs with a minimum of seven to eighty-five employees globally who were randomly recruited from various sources, such as the British Chamber of Commerce and university contacts. All interviewees possessed more than ten years of experience and were in decision making positions (CEOs, Managing Directors/Sales and Operations Directors.

In Stage 2 of the Study, a secure web-based questionnaire (survey) was sent to SMEs across the UK. The primary data submitted by respondents was then analysed and aggregated to provide the in-depth analysis detailed in this comprehensive report.

⁸ 'University of the year', 2020 and Outstanding Entrepreneurial University, 2020 by The Guardian and Times Higher Education respectively

As the aim of the research is to collect aggregate level organisational data, all responses are anonymised, and any identifying information stripped from the analytical process. Therefore, no individual or survey participant can be identified in the report. Commercial exploitation of data is strictly prohibited.

Research Schedule

Research is a funded PhD project (3 year) and started in September 2017. However, semi-structured interviews were conducted in summer 2019 and the web-based survey was opened in December 2019 and closed in November 2020.

Data cleaning and data analysis

All survey responses were exported to an excel spreadsheet and any identifying and/or confidential information from the cleaned data was removed. Total responses collected were 1325 on the day of closure. However, 68% of responses were less than 50% complete and were unsuitable for inclusion in the analysis. Additionally, after careful investigation of the data, several more responses had to be deleted for the purpose of the statistical analysis. As a result, 415 completed responses were utilised for the statistical analysis, incorporating data testing for appropriateness of methods to be utilised. Next, Explanatory Factor Analysis⁹ (EFA) and Confirmatory Factor Analysis¹⁰ (CFA) were utilised. Furthermore, a Correlation matrix and regression analysis were conducted to establish relationship between outcome (predicted) and independent (predictor) variables.

⁹ Please refer to Glossary of terms

¹⁰ Please refer to Glossary

Research Findings

Profile of the SMEs

For any country level analysis, it is important that responses are gathered from the widest section possible of the population. Hence the survey was solicited from across the UK, across sectors, age of the organisation, and exporting years, the only selection criterion being that the organisation was an independent UK exporting company with less than 250 employees (European commission, 2008). In this section, we report on the demographics of the sample in our data set (n=417).

Size (Number of employees)

The sample size has 109 (26%) business with less than 10 employees, 56 (13%) with 10-20 employees, 89 (21%) with 21-50 employees, 84 (20%) with 51-100 employees, 76 (18%) 101-250, 3 with more than 250 employees.

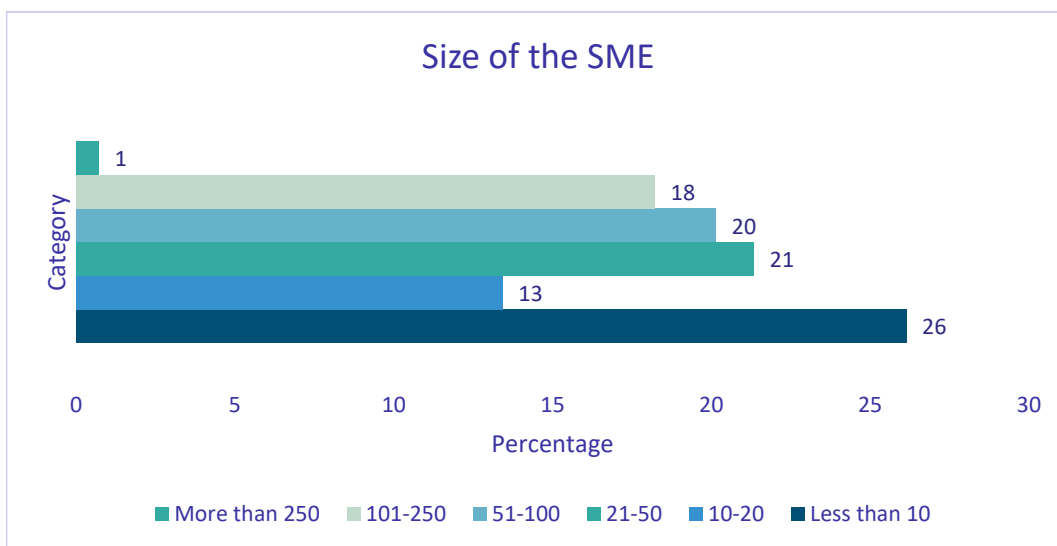


Figure 1: Size of the SME

Sector/Industry

SMEs across sectors in UK were included namely manufacturing 28%, IT (information technology) 14%, finance 8%, automotive 4%, retail 25% and other 21%.

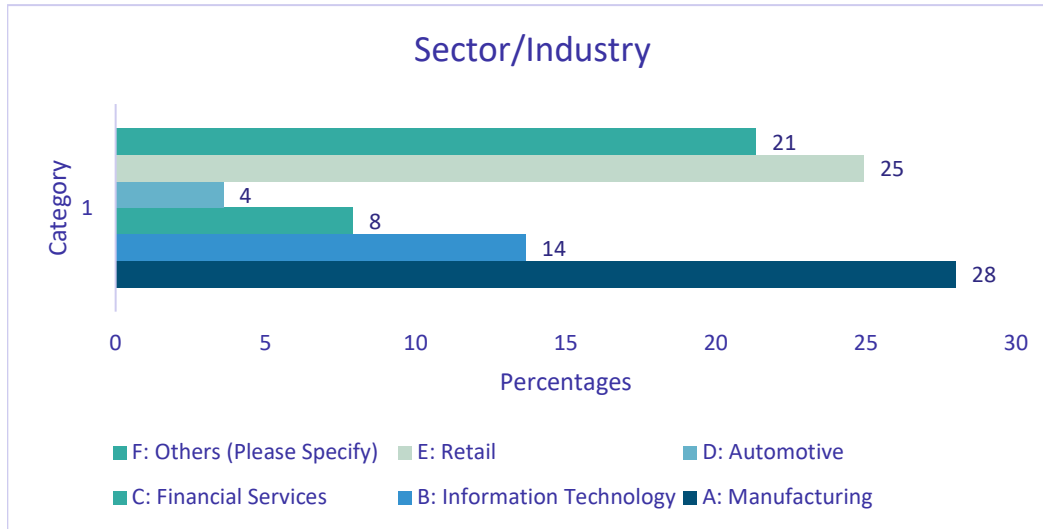


Figure 2: Sector/Industry

Age (number of years since inception)

The research aims to seek wide participation. For our sample data of 415, 90 businesses had been created in the last 5 years, while 300 had been in operation for between 6 and 50 years, while 27 businesses had existed for over 50 years.

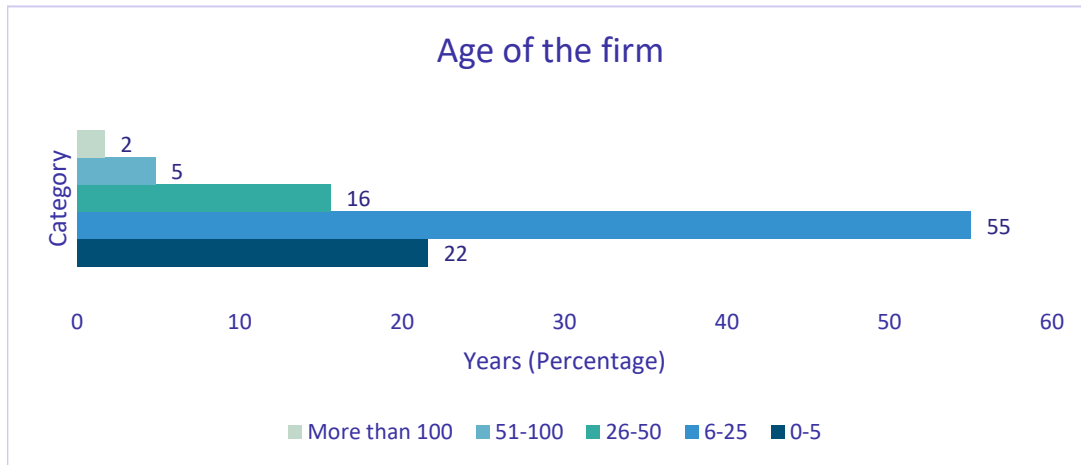


Figure 3: Age of the firm (number of years since inception)

Exporting experience in years

For our sample 143 business had exporting experience of less than 5 years and 269 had exporting experience between 5-50 years and 5 had more than 50 years' experience.



Figure 4: Exporting experience in years

Region

Although efforts were made to obtain wider participation across the UK, the sample represents England 58%, London (England) 23%, Scotland 11%, Wales 6% and Northern Ireland 2%

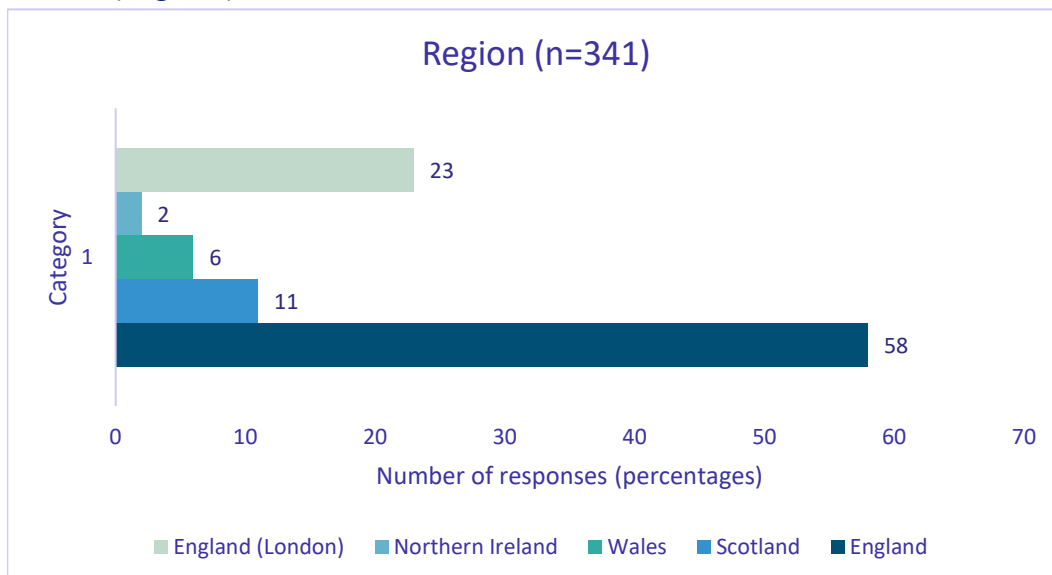
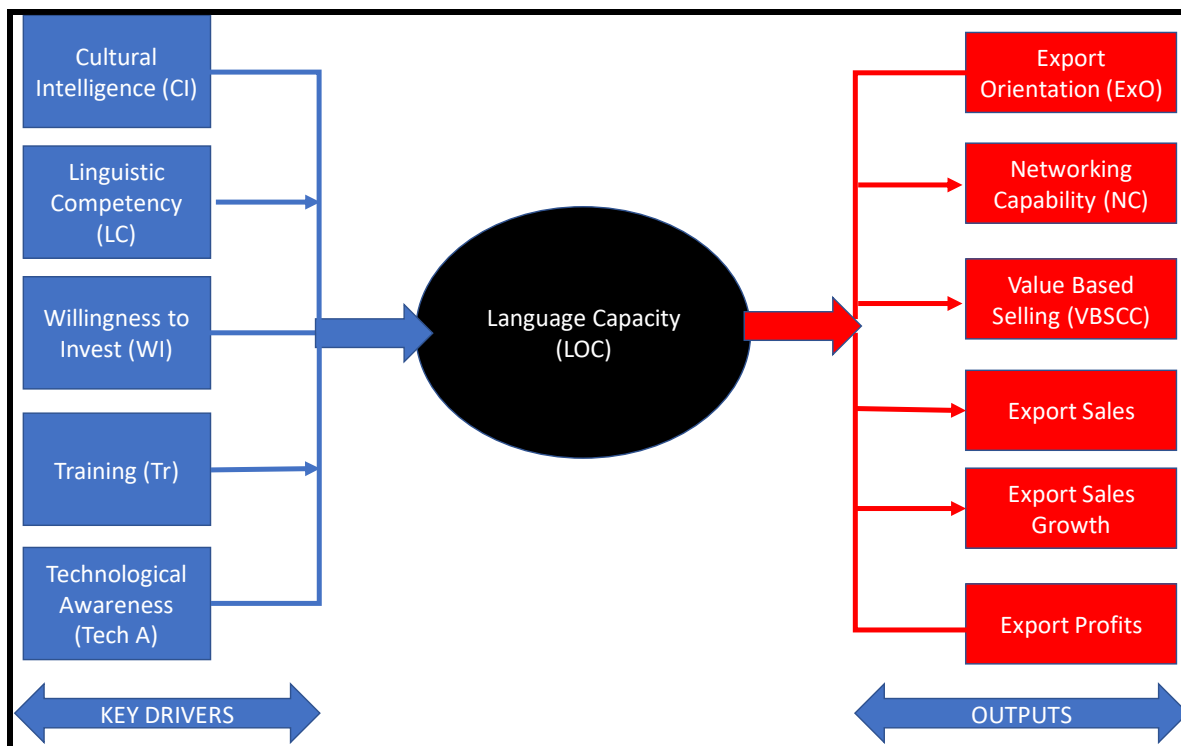


Figure 5: Registered office

Main Findings of the report

The research tries to understand the impact of language capacity (LO-C)¹ on organisation export performance and identifies key drivers that facilitate of LO-C within the organisation. Key drivers identified are Language competencies⁷, Cultural intelligence⁷, Willingness to invest and Training for languages and Technological awareness and its relative importance on LO-C. Below is a graphical presentation of two key relationship studied in this research: -

Figure 6: Simplified version of Conceptual framework of the LO-C, its drivers and performance indicators



This diagram outlines the scope of the study, which identifies factors influencing Language Capacity; and how Language Capacity then impacts performance factors relevant to an SME seeking to internationalise.

Main findings (1): Data Descriptive- Means, Std Deviation and Correlations

Means- an average and std. deviation- movement away from the average on either side are basis of any statistical analysis and we present here, means and std. deviation of key factors studied in this report namely, Linguistic competence (LC), Cultural Intelligence (CI), Willingness to train (WI), Training (Tr), Technological awareness (TechA), language capacity (LO-C), Export orientation (ExO), Networking capability (NC) and Value based selling (VBSCC).

Means and standard deviation for our data

| Descriptive Statistics | | | | | | | | | |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | LO-C | NC | VBSCC | ExO | LC | CI | WI | Tr | TechA |
| N | 417 | 416 | 416 | 415 | 417 | 417 | 417 | 417 | 417 |
| Mean | 3.6478 | 3.7668 | 3.9156 | 3.7774 | 3.6171 | 4.0600 | 3.6387 | 3.2206 | 4.1543 |
| Std. Deviation | 0.78481 | 0.87711 | 0.68496 | 0.68257 | 1.11286 | 0.61144 | 0.95632 | 1.13125 | 0.63752 |
| Skewness | -0.646 | -0.861 | -0.774 | -0.544 | -0.796 | -0.738 | -0.732 | -0.357 | -1.106 |
| Kurtosis | 0.223 | 0.911 | 1.056 | 0.090 | -0.193 | 1.301 | 0.223 | -0.795 | 2.509 |

Table 1: Means and Standard Deviation

In summary, this means:

- The highest average score across the group was for Technological Awareness (defined as technology facilitated language services, for example, google translate). Training (defined as facilitating language training courses for staff development) had the lowest score. Therefore, of the factors considered, SMEs highest capability was in technological awareness. Training had the lowest level of capability.
- Training also had the largest variance in values between firms. This means for this characteristic there was the widest score between the highest and lowest of firms in the study. Technological awareness had the lowest variance, so all firms performed at a similar level.

Correlations analysis

The correlation coefficient indicates the strength of association between factors involved in the study. The value ranges from +1 to -1 indicating a perfect positive relationship (45 -degree slope) 0 indicating no relationship (flat horizontal line) and -1 indicating a perfect negative or reverse relationship. We have no negative relationship factors in our study.

The key drivers within an organisation that facilitate the identification of LO-C are Language competencies, Cultural intelligence, Willingness to invest and Training for languages and Technological awareness¹¹. The drivers are corelated but at the same time distinct which has been tested using validity measures and all correlations are statistically significant. Further, existing research identifies Export orientation (ExO) as a key subjective measure for export performance we also examined Networking capability (NC) and Value based selling (VBSCC) as other important concepts related to business. Along with export orientation, which has been identified as a key indicator of exports among SMEs, export sales, export profit and export sales growth are measured on a 5- point Likert scale to study the impact of LO-C on actual performance indicators. Please refer to Table VII, VIII and IX for correlation coefficients in Appendix. Summary of correlation analysis is presented below: -

- Language competencies is defined as the linguistic competencies of an individual and is highly correlated with cultural intelligence. SMEs that invest in individual language skills or employing staff with language skills are better able to understand cultural differences between markets and vice-versa.
- Less so but still significant, Language competencies is also correlated with being willingness to invest (defined as investments in document translation for example) and also in Training.
- Willingness to invest is also highly correlated with cultural intelligence (adapting to new contexts, and training and slightly less so with technological awareness.
- Export orientation is highly correlated with Value Based Selling (VBSCC) in international markets. So, firms which are more export orientated work closer with customers to develop products and create value in export markets.
- Still significant is Export Orientation and networking – so firms active internationally work hard to build networks.
- Value Based selling and networking are highly correlated. This indicates how SMEs use of networks to build value amongst groups of customers in export markets.
- Not unexpectedly sales, growth and profits are highly correlated and, in that sense, confirm the underlying validity of the data.
- Also export orientation is correlated towards sales, profit and growth. This is important in our study because it highlights any factors which can influence export orientation will have a positive impact on the international sales, growth and profit prospects of an SME. In this study LO-C is highly correlated to Export Orientation and is considered in more detail in the regression analysis.

¹¹ Please refer Glossary of terms

Main findings (2): Impact of LO-C on Performance Indicators

Multiple Regression (linear) Model (measured as $Y = b_0 + b_1X_1 + b_2X_2 + \dots + e$) which measures the regression coefficients (b_1, b_2) is a numerical value of predictor-x (independent) variable on Predicted-y (outcome) variable has been utilised to estimate the impact of LO-C on both subjective and objective outcomes. It is important to mention that we have size, industry/sector, age of the firm (in years), exporting experience and number of countries exporting to as control variables.

Key Performance Indicators

Using SPSS statistical tool, following graphs represent regression coefficients (b) of LO-C on Export Orientation (ExO) is 0.594, Export sales is 0.296, Export profit is 0.346, export sales growth is 0.328 (refer Appendix- Table X, Table XIII, Table XIV, Table XV).¹² Regression coefficient represents the amount of change in the outcome (predicted) variable for a one-unit change in independent (predictor) variable.

Below is graphical presentation of LO-C on key performance indicators.

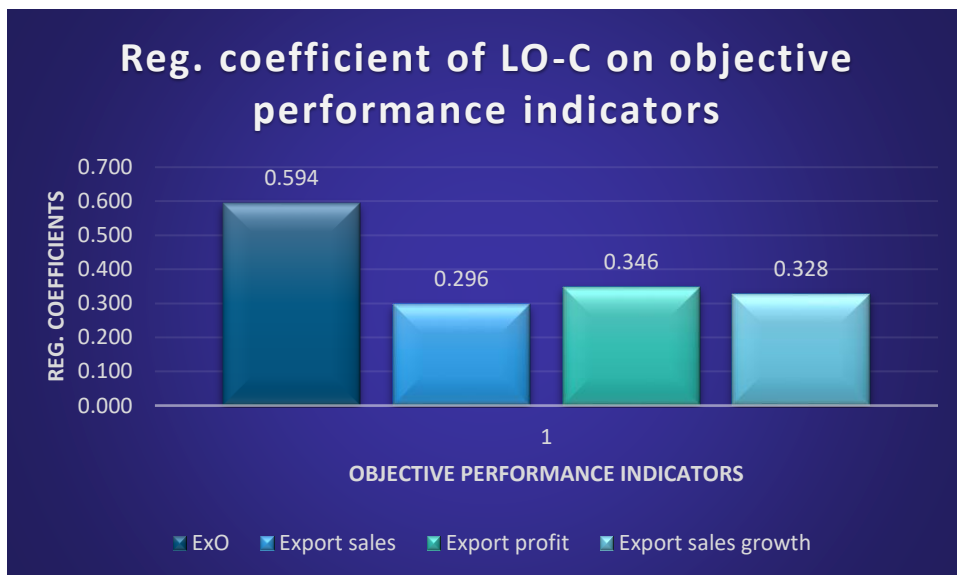


Figure 6: Regression coefficients of LO-C on Key performance indicators

The focus of the research is language capabilities at an organisational level and its impact on export orientation, sales, profit, and export sales growth. Obviously, there are other factors

e.g., cost of production, marketing expenditure, which were not considered in this study. We wanted to look at how language could assist exporters. These results show:

- LO-C has statistically a very strong relationship to Export Orientation. Firms which are motivated, plan and use languages are highly likely to increase Export Orientation. Indeed, for every 1 unit increase in LO-C investment produces 0.594 increase in export orientation of the firm. This means the more the firm invests in languages and related factors, there will be an increase in export orientation.
- We know the strength of relationship proven earlier between Export Orientation and export sales, growth, and profit. LO-C has a significant indirect impact on export sales, growth, and profits.
- LO-C also has a significant direct relationship on export sales, export growth and export profit and every 1 unit increase in LOC investment also produces increased export profits (0.346), export sales (0.296) and export growth (0.328).
- As we see the sector coefficients- financial services, retail, automobile, IT services are all statistically insignificant- this indicates that impact of LO-C on the performance indicators do not vary in comparison to manufacturing sector as a base sector, in our sample. The direct relationship between LO-C and export sales, export growth and export profits are therefore sector agnostic in our study – that is, impact is not significantly different for different sectors.

Subjective performance Indicators

Using SPSS statistical tool, following graphs represent regression coefficients of LO-C on Networking Capability (NC) is 0.642 and Value based selling (VBSCC) is 0.585. Regression coefficient represents the amount of change in the outcome (predicted) variable for a one-unit change in independent (predictor) variable.

¹²Coefficient of determination (adjusted R²) which measures explanatory power of the Model, Export Orientation model is 0.474, Export sales model is 0.114, Export profit model is 0.126, Export sales growth model is 0.119 (R² ranges between 0 to 1). It is important to note that adjusted R² provides an estimate of strength of relationship between the variables in the model and is not the formal statistical test for the relationship. F- test of overall significance determines whether the relationship is significant.

Below is the graphical of coefficients of regression models¹³: -

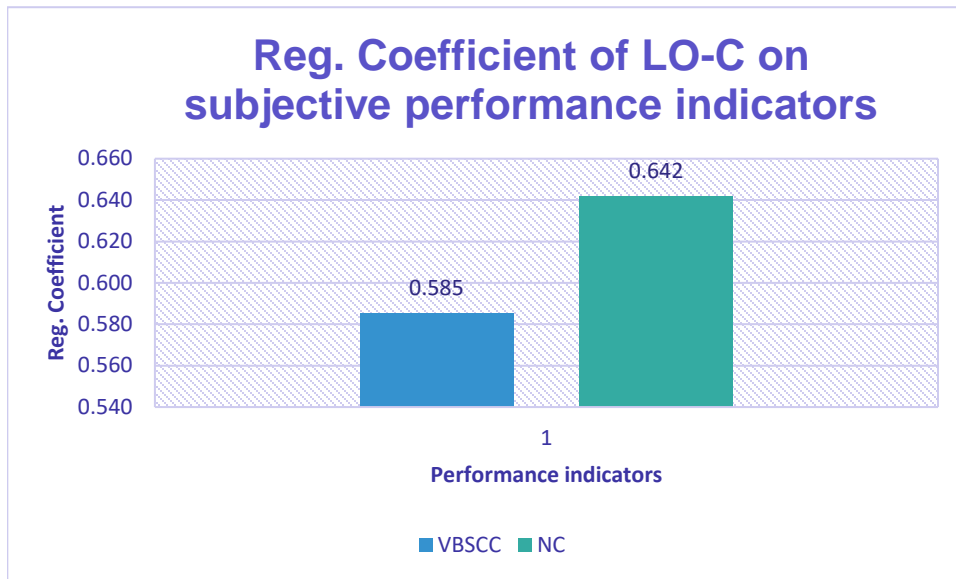


Figure 7: Reg. coefficient of LO-C on subjective performance indicators

These results show a very strong relationship between LO-C and Value Based Selling (VBSCC) and Networking (NC). This means:

- We noted earlier Export orientation was highly correlated with Value Based Selling and networking in international markets. LO-C also has a strong relationship with these factors. Indeed, for every 1 unit increase in LO-C investment produces 0.585 increase Value Based Selling and 0.642 increase in networking. LO-C therefore also has an indirect relationship with Export Orientation due to its high correlation with Value Based Selling and networking in international markets.

Main findings (3): Key drivers of LO-C

Using SPSS statistical tool, following graphs represent standardised beta coefficients (b) of Linguistic Competencies (0.210), Cultural Intelligence (0.227), Willingness to Invest (0.275), Training (0.349) and Tech Awareness (0.065) on language capacity (LO-C). These regression coefficients indicate the relative importance of each driver on language capacity (LO-C)¹⁴.

¹³ Coefficient of determination (adjusted R²) which measures explanatory power of Networking Capability Model (Table XI) is 0.356 and Value based selling Model (Table XII) is 0.488. (adjusted R² ranges between 0 to 1).

¹⁴ It is important to note that adjusted R² which measures explanatory power of the model is 0.787 (ranges between 0 to 1).

Below is graphically presented, regression coefficients of LO-C

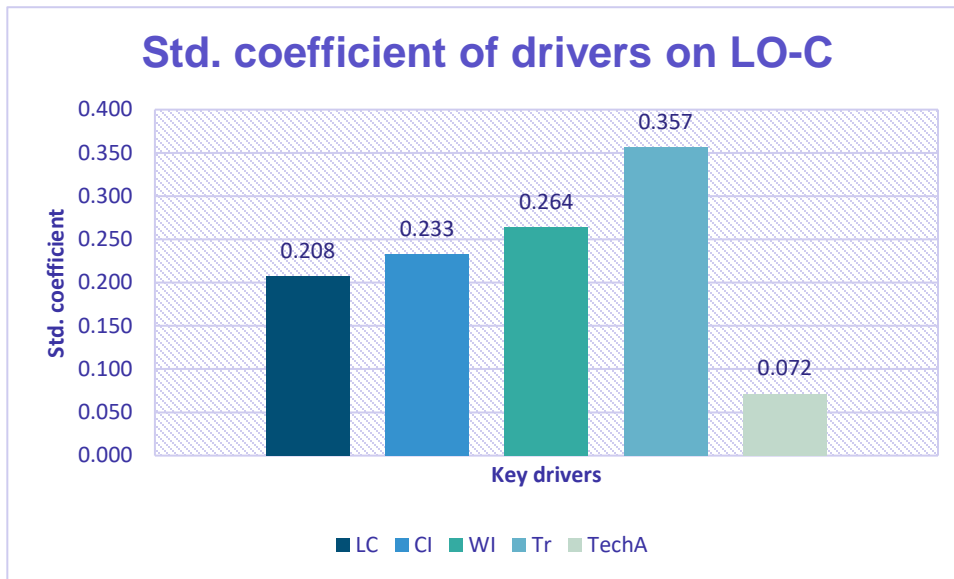


Figure 8: Std. coefficient of key drivers on LO-C

In our sample this means:

- Training and Willing to Invest are the top two factors influencing LO-C. Increases in training and staff development in languages together with readiness to invest in translation of relevant documents, packaging, marketing material etc will have the most significant impact on LO-C. This will strengthen the role language competencies play within SMEs.
- Technological awareness is the least important driver to LO-C. More importantly, language competencies and cultural intelligence are both critical for adept LO-C within the organisation.

Conclusion

Our research is to our knowledge the first large quantitative study the focus of which is on language capacity at an organisation level and its impact on export orientation, sales, profit, and export sales growth. Obviously, there are other factors that will influence the success of trading globally (cost of production, marketing expenditure etc) which are not considered in this study. Our objective has been to focus on language capacity (LO-C) at an organisation level as defined as attitudes, behaviour as well as shared perception of policies and practise of employees and the management alike towards the role linguistic competencies play within the

organisation for international business and marketing. The study sought to identify how LO-C can impact SMEs international trading performance. Our research has proven language competencies is highly correlated with a cultural intelligence in export markets and willingness to invest and training will support this. LO-C has statistically a very strong relationship with export orientation which in turn is highly correlated to export sales, export profit and export growth. So, SMEs who are motivated, plan and use languages are highly likely to increase Export Orientation and this research clearly indicate SMEs embracing language capabilities are 30% more successful in exporting than those which do not. LO-C has a consequential positive impact on Export Orientation, export sales, growth, and profits. LO-C also has a strong relationship with Value Based Selling (VBSCC) and Networking (NC) which again are highly correlated with export orientation. Furthermore, SMEs with successful international performance, utilise language capacity not only through linguistic competence and cultural awareness but also by engaging in language training and/or willingness to investment (in language services, for instance) to build global networks.

Support for Business

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Glossary of Terms

Key Variables in Model

- Exporting activities- Exporting includes exporting directly by the firm, selling to foreign and LO-Cal representatives or offices, and through sales agent/office/branch in foreign markets.
- Language capacity (LO-C): LO-C refers to both motivation and preparedness (attitude) towards developing language related capabilities as well as (behaviour) actual utilisation of the language capabilities within the organisation.
- Linguistic competencies (LC): - LC refers to different levels of language competencies defined by CEFR and is identified as linguistic competencies of an individual.
- Cultural intelligence (CI): - is defined as person's capability to adapt effectively to new cultural context.
- Technological awareness (TA): - Awareness of technology facilitated services in languages like translation companies or computer assisted (machine learning) services like google translate, WeChat or any similar platforms or services.
- Willingness to Invest (WI): - readiness to invest in translation of relevant documents, for e.g., operation manual, website translation, packaging etc.
- Training (Tr): - Encourage, support, and facilitate staff's development through language training courses online or otherwise.
- Export orientation (ExO): - Export orientation refers to firm's ability to generate, respond and disseminate export intelligence/ information for enhancing exports.
- Networking capability (NC): -Utilisation of personal and/or professional connections ad networks with customers, suppliers, competitors etc.
- Value based Selling and co-creation in International markets (VBSCC): - Understanding customers' requirements, creating/adapting products, and services by collaborating with buyers.

Statistical tools:

- Regression Analysis: - Multiple Regression (linear) Model is measured as $Y = b_0 + b_1X_1 + b_2X_2 + \dots + e$ and measures the regression coefficients (b_1, b_2) as a numerical value of predictor-x (independent) variable on Predicted-y (outcome) variable
- Regression coefficient (b): - It represents the amount of change in the outcome (predicted) variable for a one-unit change in independent (predictor) variable. Multiple regression analysis estimates regression coefficients which indicate relative importance of each independent (predictor) variable on predicted (outcome) variable.
- Coefficient of determination (adjusted R2): - It measures explanatory power of the model and provides an estimate of strength of relationship between the variables in the model and is not the formal statistical test for the relationship. F- test of overall significance determines whether the relationship is significant or not.
- Exploratory Factor Analysis (EFA) and Confirmatory factor Analysis (CFA): - EFA is statistical method to identify underlying structure of large set of variables and CFA is necessarily used to validate the results and assess the replicability of results in the analysis.

Control Variables

- Size- Number of employees
- Age- Number of years since inception
- Industry/sector
- Exporting years- Number of years, firm has been exporting.
- No. of countries exporting

Appendix

<https://drive.google.com/file/d/1hPyzy5CihXuNbjRjSjpw57WhPKLJmzk3/view?usp=sharing>