Purchasing skills:

Comparing Dutch and Austrian industrial job advertisements with the help of KODE®X

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MASTER THESIS

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'The key to good decision-making is not knowledge,
It is understanding. We are swimming in the former.
We are desperately lacking in the latter.'[1]

Malcolm Gladwell

[1] Gladwell (2007), p. 49.

PERFECT
Purchasing Education and Research for European Competence Transfer

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Thank you all!

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Abstract

This thesis is part of the research project 'Purchasing Education and Research for European Competence Transfer' (PERFECT) that has the aim to design a harmonized purchasing and supply management (P/SM) curriculum for universities. In the first stage of the research the P/SM landscape is subject of the analysis. Learning objectives in academia, the competencies mentioned in the scientific literature and the subject of this thesis, the skills stated in online P/SM job advertisements, are mapped. This study analyses 99 Austrian and 99 Dutch P/SM job advertisements to find similarities and differences.[2]

Employers in both countries are interested in hiring experienced, undergraduate-schooled (BSc) seniors with *'ERP and SAP knowledge'*, experienced with *'project and process management'*, being *'effective'*, *'proactive'* and *'decisive'*, having *'team spirit'* and *'overview'* and a purchaser has to be a *'holistic thinker'*. Additionally, a purchaser must be *'responsible'* and *'trustworthy'*. It is striking how clear the cultural differences between both countries are displayed in the texts of the job ads: fully in line with the work of Hofstede (1980). Austria shows 'masculine' and 'collectivistic' features and the Netherlands is 'feminine' and 'individualistic'. Remarkable is also that employers seem to avoid to mention the required 'know-what', i.e. the hard skills or the explicit knowledge, at the other hand they are lavish with 'know-how', i.e. the soft skills or tacit knowledge.

Furthermore, this study found evidence that supports the assumption that a harmonised academic P/SM curriculum does not exist; only 1 percent of the employers ask for applicants with a P/SM degree. P/SM practice and P/SM academia are in accordance with each other: P/SM curricula are scarce and employers do not request P/SM graduates. However, scholars agree that there is a need for purchasers (MSc) that can fulfil tasks in the central strategic position of the P/SM function in a firm. Scholars and employers agree that an important skill for the contemporary purchaser is *'contemplation'*: a purchaser needs to think out-of-the-box, step back, rethink and solve problems; this seem to be characteristics of a strategic thinker.[3] This may indicate there is a latent need for P/SM graduates in companies.

[2] Initially there were 100 ads, but due to an error 1 ad fell off.
[3] Jehan (2012), p. 338.

Abstract (in Dutch)

Deze *master thesis* maakt deel uit van het onderzoeksproject *'Purchasing Education and Research for European Competence Transfer'* (PERFECT) dat zich ten doel stelt een Inkoop en Leveranciers Management (P/SM – *Purchasing and Supply Management*) lesprogramma voor universiteiten te ontwerpen. In de eerste fase van het onderzoek van PERFECT zal het inzichtelijk maken van het P/SM-landschap onderwerp zijn van de analyse. In kaart worden gebracht: de leerdoelen in de academische wereld; competenties en vaardigheden die in de wetenschappelijke literatuur genoemd worden en competenties en vaardigheden genoemd in online P/SM personeelsadvertenties. Er zijn in deze studie 99 Oostenrijkse en 99 Nederlandse P/SM personeelsadvertenties bestudeerd met als doel om overeenkomsten en verschillen tussen beide landen te vinden.

Werkgevers in beide landen zijn geïnteresseerd in het aannemen van ervaren HBO'ers: *seniors* met kennis van inkoopprogrammatuur, die ervaring hebben met 'project- en procesmanagement', die 'effectief', 'proactief' en 'besluitvaardig' zijn, die kunnen werken in 'teamverband' en die 'overzicht' kunnen houden en 'holistisch' kunnen denken. Daarnaast moet een inkoper 'verantwoordelijk' en 'betrouwbaar' zijn. Het is opvallend hoe helder de culturele verschillen tussen beide landen worden weergegeven in de teksten van de vacatures: ze zijn volledig in overeenstemming met het werk van Hofstede (1980). Oostenrijk toont 'masculiene' en 'collectivistisch' kenmerken en Nederland is 'feminien' en 'individualistisch'. Opmerkelijk is ook dat werkgevers lijken te vermijden om *'know-what'* te vermelden in de advertenties, dat wil zeggen de *hard skills* of expliciete kennis, aan de andere kant zijn ze kwistig met *'know-how'*, dat wil zeggen de *soft skills* of impliciete kennis.

Deze studie heeft bewijs gevonden voor de aanname dat een standaard academische P/SM lessencyclus niet bestaat; slechts 1 procent van de werkgevers vraagt om kandidaten met een P/SM graad op universitair niveau. De P/SM praktijk en de P/SM academische wereld zijn wat dat betreft in overeenstemming met elkaar: P/SM lesprogramma's zijn schaars en werkgevers vragen niet om P/SM afgestudeerden. Echter, wetenschappers zijn het erover eens dat er behoefte is aan universitair geschoolde inkopers, die taken kan uitvoeren vanuit centrale strategische positie die de P/SM functie heeft in een bedrijf. Wetenschappers en de werkgevers zijn het erover eens dat een zeer belangrijke vaardigheid voor de hedendaagse koper *'overdenking'* of *'contemplatie'* is. Een inkoper moet *out-of-the-box* kunnen denken, een stap terug kunnen doen, kunnen heroverwegen en moet problemen op kunnen lossen. Dit lijken kenmerken van een strategische denker te zijn. Dit kan duiden op een latente behoefte van het bedrijfsleven aan P/SM afgestudeerden.

Glossary

ERP: Enterprise Resource Planning.

EXACT: Exact is Dutch software house developing ERP, CRM, HRM and financial software.

GDP: Gross Domestic Product: the value of all goods and services produced in a country within a year.

HRM: Human Resources Management.

KODE®X: ***Ko****mpetenz-****D****iagnostik und* ***E****ntwicklung* *Ex**plorer*** (German) or in English: *Competence Diagnostics and Development*.

PERFECT: Purchasing Education and Research for European Competence Transfer, name of the project this thesis is participating.

P/SM: Purchasing and Supply Management, which comprises the management of external inputs – materials, services, capabilities and knowledge – that are required for building, running and maintaining the focal firm's processes, while simultaneously managing the external and internal stakeholder network with an extended upstream supply network understanding (definition of PERFECT).

SAP: SAP stands for: Systems, Applications and Products and is a (German) ERP and data management software provider.

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1. Introduction: cultural specificity versus cross-country standards in purchasing skills

1.1 PERFECT project: the aim to design an European P/SM curriculum

This master thesis investigates the differences and similarities of requested skills, mentioned in Austrian and Dutch online P/SM job advertisements. The aim of this research is to contribute to the issue how to design a pan-European P/SM curriculum by revealing the employers needs and defining the cultural and structural differences.

PERFECT – the first output: mapping the P/SM landscape

This is one of the contributions to the Erasmus+ project PERFECT[4] -in the 'Output 1'-phase- in describing the current P/SM landscape (see figure 1.1). This thesis focuses on the needs of employers for qualified P/SM personnel by analysing the skills and competencies mentioned in the texts of P/SM job advertisements. Other studies within the PERFECT project are concentrating on learning objectives in P/SM curricula in academia and (in-house) training institutes. The main aim of PERFECT is to design a harmonised P/SM curriculum. Within the PERFECT group it is assumed that companies hire (under)-graduates with other specializations and often spend years bringing them up to a skills level, that other graduates in their own disciplines already possess, therefore spending considerable funds on additional training activities.[5]

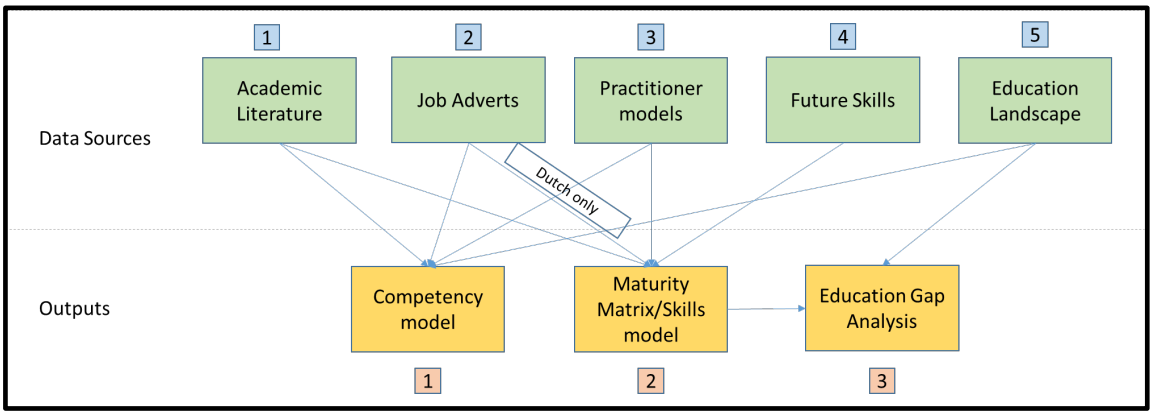

Figure 1.1 Structure of the first intellectual output of the PERFECT project[6]

[4] Purchasing Education and Research for European Competence Transfer.
[5] See: project sheet of PERFECT – appendix 1.
[6] See: PERFECT (2016), p. 13.

PERFECT, a European funded project

The PERFECT project has been set up and funded by the European Union to become the first worldwide region to establish an empirically validated pan-European PSM higher education curriculum. PERFECT is embedded into the ERASMUS+ 2015 KA2 program (Cooperation for Innovation and the Exchange of Good Practices Strategic Partnerships for Higher Education).[7]

The 3 Outputs of PERFECT

The first stage of the PERFECT project is exploring the P/SM landscape to analyse learning objectives of universities and (in-house) training institutes and skills demanded by companies; the second stage (Output 2) is about *'identifying those skills and competencies distinguishing successful companies and effective and efficient PSM'*.[8] The third step (Output 3) is to design an academic European purchasing curriculum and fourth to disseminate the curriculum and to prepare a MOOC for basic P/SM skills to be used by students to measure the levels of their P/SM skills.[9]

Comparing Austria and the Netherlands

The aim of this research is to reveal the needs of employers for P/SM personnel by using secondary data: online P/SM job advertisements in Austria and the Netherlands. In chapter 1 is elaborated on the interest of the subject and is explained why is chosen to compare Austrian with Dutch job advertisements: Austria and the Netherlands are comparable in terms of wealth.[10] However, culturally both countries deviate. Kale (1995, p. 40) performed cluster analysis based on the original four dimensions of culture of Hofstede (1983b) and found that Austria and the Netherlands belong to complete different European culture clusters. Austria and the Netherlands deviate significantly, that means that, after the cultural (and the structural) explained differences are filtered out, the remaining similarities will reveal the answer to the question what universal skills a P/SM professional needs according to European employers.

[7] Project number 2015-1-DE01-KA203-002174.
[8] See: project sheet of PERFECT – appendix 1.
[9] See: project sheet of PERFECT – appendix 1.
[10] The_World_Bank (2016).

Chapter structure

In this chapter next the different kinds of explicit and soft skills are introduced. These subjects are broadened in chapter 2 and in chapter 3 the methodology is described. In chapter 4 the results are presented, followed by the discussion, conclusions and recommendations in the 5th chapter.

1.2 Gap between the increasing importance of purchasing in business practice and the lack of harmonised purchasing curricula in academia

Growing importance of P/SM

This thesis is focused on the demand side of the purchasing human capital[11] and it exposes the results of a cross-cultural comparison of requirements that are mentioned in Austrian and Dutch online P/SM job advertisements in order to test two hypotheses. The reason for this research commences with the increasing importance of the purchasing function in the last decades.[12] Consequently, the volume of the purchased value has risen substantially.[13] The turnover of a modern European industrial firm is in most cases for more than 50 percent spent on supplies.[14] Additionally, the majority of the supplies are internationally sourced the last decades, which brings a strong focus on the P/SM function of a firm managing the international suppliers.[15]

Research on purchasing skills is needed

The purchasing function is highly strategic and the purchasing department acts as a spider in the web. There is a small amount of research that investigates *'how to develop superior skills, capabilities, and experience of P/SM professionals, how to develop and sustain superior codified knowledge of markets and supply chains, how to develop superior power resources over suppliers, how to secure and protect superior procurement competence, and how to build P/SM processes within firms that create value, are rare among competitors, are costly to imitate, and have no close substitutes. The interest in foundational theories is growing, and*

[11] Birou, Lutz, and Zsidisin (2016), p. 74.
[12] Mulder, Wesselink, and Bruijstens (2005), p. 186 and Schiele (2007), p. 274.
[13] Schiele (2007), p. 274.
[14] See: project sheet of PERFECT – appendix 1.
[15] See: project sheet of PERFECT – appendix 1.

now empirical research needs to follow.'[16] The PERFECT project responds to this call of Van Weele and Van Raaij (2014, p. 63).

Purchasing: the key to success

Purchasing is a decisive function and it can be a firm's competitive advantage[17] and is acknowledged for the impact on product quality and profitability.[18] The success of companies is importantly determined by the actions of the personnel of purchasing teams.[19] The purchasing function has become more and more team-oriented on the subject of decision-making.[20] Moreover, there is evidence that the role of purchasing and supply management (P/SM) has emerged due to a risen level of knowledge and state of practice.[21] Subsequently, an increase of the purchasing functioning leads to a substantial contribution to the total turnover of a firm.[22]

Time to focus on the soft aspects of purchasing

The purchasing function initially focused on the 'hard' aspects like process design and internal flow of materials and information. In the next phase the attention has to be put on the development of the 'soft' human aspects: establishing and maintaining relationships with first and second tier suppliers and customers, and participating in networks of inter-connected businesses.[23] Firms find themselves more and more standing in front of this complex task and are eagerly searching for employees that have the necessary skills and competences to fulfil the purchasing job. However, personnel with P/SM knowledge and skills are rather scarce to find.[24] The development of human resources in the purchasing function is of strategic importance and provides the firm eminent opportunities.[25]

[16] See: Weele and Raaij (2014). p. 63.
[17] Monzcka and Peterson (2012) p. 10 and Shub and Stonebraker (2009), p. 31.
[18] Tadepalli, Moreno, and Trevino (1999), p. 370.
[19] Mulder et al. (2005), p. 186.
[20] Giunipero, Dawley, and Anthony (1999), p. 42.
[21] Birou et al. (2016), p. 72.
[22] Schiele (2007), p. 274.
[23] Shub and Stonebraker (2009), pp. 31-32 and Harland (1996), p. 64.
[24] Nassimbeni (2006), p. 695.
[25] Monzcka and Peterson (2012), p. 13.

Purchasing lacks harmonised academic curricula

The raison d'être of PERFECT lies in the notion that the strategic buying function, purchasing and supply (chain) management in firms is getting more important, but in contrast with that, there is no harmonised higher education curriculum. The assumption is that other disciplines in the field of business administration, such as marketing or finance, have those harmonised curricula. This phenomenon is seen at national and international levels (i.e. in Europe and North-America).[26]

Academia's task: translating business needs in learning objectives

Universities have an important role at the supply side of the purchasing human capital[27] and have a task translating the needs in the field of purchasing and supply into learning objectives, yet there is evidence that there is no standardized or harmonised P/SM curriculum in academia.[28] In other words: unlike neighbouring fields in business administration as for instance Marketing and Finance a more or less agreed upon standardized or harmonised higher education curriculum does not exist in P/SM in Europe.

1.3 The role and use of hard and soft skills in the purchasing practice and the cultural impact

Explicit and tacit knowledge

Learning objectives in academia provide students with different skills to be able to execute difficult, ordered patterns of behaviour to perform future tasks competently.[29] There is a distinction of skills in explicit '*know-what*' and tacit '*know-how*',[30] which is relatively young. Declarative knowledge (know-what) is an old concept. The interest for explicit knowledge goes back to the ancient Greeks.[31] Tacit-knowledge-grounding-father Mihály Polányi explained the concept of tacit knowledge mid 1960s with the -in the field- famous words: '*We can know more than we can tell'* and *'most of this* [tacit] *knowledge cannot be put into words'*.[32]

[26] See: project sheet of PERFECT – appendix 1. Birou et al. (2016), p. 74.
[27] Birou et al. (2016), p. 74.
[28] Birou et al. (2016), p. 72.
[29] Smith (2002), p. 208.
[30] Smith (2002), p. 209.
[31] Nonaka (1994), p. 15.
[32] See: Polanyi (1966), p. 4.

The success factor of tacit knowledge

Professionals, like purchasers, need both explicit and tacit knowledge. Purchasing managers are making multiple important decisions every day with the use of tacit knowledge in fifty percent of the cases.[33] There is evidence that tacit knowledge is a distinctive success factor. Academic students that have a high use of tacit knowledge achieve higher grades, for instance.[34]

An international curriculum and cultural differences

The need for a harmonised international, in this case: pan-European, academic PS/M curriculum raises the question of the cultural implications. Reviewing the P/SM skills literature a mix of explicit and tacit competencies can be distinguished: technical; interpersonal; internal and external enterprise and strategic business skills.[35] The increase of the global economy affected the number of publications on international business issues positively,[36] however the cultural aspects of explicit and tacit knowledge in PS/M requirements have not been subject of research and therefore analysis is needed. Shou and Wang (2015) are the only scholars who investigated P/SM job ads in an international setting. They found cultural differences between countries, but they did not explain why these differences occur and call for further research.[37] This research does reveal the explicit and tacit knowledge similarities and dissimilarities in (Austrian and Dutch) job ads.

The importance of job ads as a source of employers' needs

Job advertisements are an important source for highly up-to-date and available data to understand what employers do require from employees, so a substantial sample of P/SM job advertisements can provide an effective dataset to analyse desired P/SM competencies.[38] The similarities can be used as input for a pan-European design of a harmonised P/SM curriculum. Cultural at the one hand and structural dissimilarities at the other hand can contribute in both countries as a country or culture specific addition to a harmonised pan-European curriculum.

[33] Giunipero et al. (1999), p. 49.
[34] Somech and Bogler (1999), p. 605.
[35] Tassabehji and Moorhouse (2008), p. 58.
[36] Sivakumar and Nakata (2001), p. 555.
[37] Shou and Wang (2015), p. 12.
[38] Mathews and Redman (2001), p. 549; Shou and Wang (2015) p. 2 and Arcodia and Barker (2003), p. 5 and Rafaeli and Oliver (1998), p. 347.

Research questions

This research aims to solve the following research questions:

- *Research question 1:* What are the corresponding requirements in Dutch and Austrian purchasing job advertisements?

- *Research question 2:* What are the culturally induced differences in requirements demanded in Dutch and Austrian purchasing job advertisements?

- *Research question 3:* What are the institutionally induced differences in requirements demanded Dutch and Austrian purchasing job advertisements?

Within the PERFECT project it is assumed that due to a negligible number of P/SM academic curricula in Europe[39] employers hire academic graduates from other fields than P/SM like marketing, finance and HRM to train them to be qualified purchasers. At the section were the research questions will be answered the assumptions of the PERFECT project will be discussed.

1.4 Comparing P/SM job advertisements from cultural different countries and Hofstede's model of Cultural Dimensions

Three European cultural clusters: Austria and the Netherlands deviate

For this pan-European research is chosen to use P/SM job advertisements from two European countries with a distinctive different cultural profile: Austria and the Netherlands. Both are grouped up in two different clusters. For a study on the subject of European integration and the alignment of marketing strategy of firms Kale (1995, p. 40) used Hofstede's original four dimensions of culture and found three clusters. This cluster analysis has shown evidence that Austria, Germany, Switzerland, Italy, Great Britain, and Ireland have matching national cultural values,[40] that are characterized '*by medium-high individualism, medium uncertainty*

[39] Lappeenranta University of Technology in Lappeenranta, Finland and the University of Twente in Enschede, the Netherlands are the only two public universities who offer a P/SM curriculum. Audencia Business School in Nantes, France and Politecnico di Milano in Milan, Italy are private schools

[40] Kale (1995), p. 40.

avoidance, small power distance, and a high level of masculinity'[41] whereas the Netherlands has a match with the Scandinavian cultural values in Denmark, Sweden, Finland, and Norway.[42] '*This cluster depicts high individualism, weak to mild uncertainty avoidance, small power distance and low masculinity'*.[43] The other cluster consists of *'Belgium, France, Greece, Portugal, Spain, and Turkey. (...) These countries exhibit a wide variation on the individualism dimension. (...) Other cultural aspects of countries in this cluster include medium power distance, strong uncertainty avoidance, and low to medium masculinity'.*

The Cultural Dimensions of Hofstede

In both Austria and in the Netherlands 99 P/SM job adverts where found on online platforms[44] and subsequently the required competencies were mapped into a skills model to be able to appoint similarities and dissimilarities. Hofstede's model of Cultural Dimension[45] was used to explain the significant cultural differences between the two countries. Hofstede's model distinguished 4 and later 5 and 6 dimensions: individualism versus collectivism, large versus small power distance, strong versus weak uncertainty avoidance, masculinity versus femininity and long-term versus short-term orientation (and the sixth: indulgence).[46]

Individualism versus Collectivism

The Cultural Dimension of 'Collectivism' is about 'belonging to a group' and 'being loyal to a group' and the opposite: 'being individualistic' and 'taking care for the own close family'.[47] Hofstede found a positive relationship between individualistic cultures and the height of the gross national product.[48] Countries with individualistic cultures have a higher gross national product and know more wealth.

Power: personal or just role? And Masculine and Feminine focus on success.

Power Distance is the acceptance of the spread of power in a society.[49] '*In small-power-distance situations, subordinates and superiors consider each other as existentially equal; the*

[41] See: Kale (1995), p. 40.
[42] Kale (1995), p. 40.
[43] See: Kale (1995), p. 40.
[44] Search terms in German and Dutch: 'buyer', 'technical buyer', 'junior buyer' and 'senior buyer' on online platforms karriere.at, monsterboard.nl, intermediair.nl/vacatures, nevi.nl; double ads were taken out.
[45] Hofstede (1983a), p. 41 and Hofstede (1983b), p. 81.
[46] Hofstede (1983a), p. 43; Hofstede (1983b), p. 78 and Hofstede and Minkov (2010), p. 496.
[47] Hofstede (1983b), p. 79.
[48] Hofstede (1983b), p. 83.
[49] See: Hofstede (1983a), p. 44.

hierarchical system is just an inequality of roles, established for convenience, and roles may be changed'.[50] A high masculinity score means that the society is competition-driven. In a masculine society a synonym for having success is 'being the best', whereas in a feminine society the quality of life and doing the things one likes, are synonyms for success.[51]

Low versus high Uncertainty Avoidance

Hofstede's definition of the Cultural Dimension of 'Uncertainty Avoidance' is: **'***The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these'*.[52] '*Long- versus short-term orientation, (…) a national value dimension became Hofstede's fifth dimension of national cultures'*[53] and is based on the teachings of Kung Fu Zi (Confucius). This dimension describes '*societies preference for traditions or not. The societies that score low have a preference for'* traditions and norms and dislike societal change.[54]

[50] See: Hofstede, Hofstede, and Minkov (2010), p. 74.
[51] Hofstede (1984), p. 390.
[52] Hofstede and Minkov (2010), p. 493.
[53] Hofstede and Minkov (2010), p. 493.
[54] See: The_Hofstede_Centre (2016a) "Austria in comparison with the Netherlands".

2. Theory on skills requirements and cultural differences

In this chapter the theoretical basis for purchasing skills and different cultural dimensions is set. In the first paragraph a structural review -a joint effort of the PERFECT project- of the scientific literature is the centrepiece. Than 'Hofstede' is further worked out. Geert Hofstede collected in the period 1967-1973 120.000 questionnaires from IBM personnel in 50 countries. Hofstede (1928) is still active in 2016.[55] He replicated his study in the 21st century: *'the original results,'* from 1967 till 1973, '*do not seem to depend much on Hofstede's original choice of IBM managers'*.[56] In this chapter it will be made clear that Austria and the Netherlands deviate strongly on the cultural dimension of masculinity. This difference will be hypothesised and eventually tested in chapter 5.

2.1 Skills requirements in purchasing: soft skills and hard skills

A systematic review of the scientific purchasing skills literature

In the PERFECT project a joint effort was made to *'review the current academic literature that discussed the skills and competencies necessary for PSM professionals to perform their work in the challenging environment they find themselves in. A systematic and rigorous approach was undertaken to identify these key academic sources to ensure that a wide variety of sources were identified and that the skills set represents the full scope of these skills'*.[57] Search attempts were made in Scopus and Google Scholar using the following search terms: *'Purchasing, Purchasing + Professional, procurement, buyer* AND *competence, competencies, skill, education'*. The decision was made to use these search terms, because those are used '*as keywords or in abstract in well-known and cited articles on the subject of purchasing skills and to obtain the most complete results possible'*.[58] This search resulted in the identification of 29 key academic papers that are shown in appendix 3. In table 2.1 a list of the most important skills is displayed.[59]

[55] Hofstede contributed to the *APA Handbook of men and masculinity* that is published in 2016.
[56] See: Batenburg (2007), p. 183.
[57] PERFECT (2016) White Paper, p. 16.
[58] See: PERFECT (2016) White Paper, p. 16. (Carr & Smeltzer, 2000) and (Knight, Tu, & Preston, 2014).
[59] Anderson and Katz (1998); Baily, Farmer, Crocker, Jessop, and Jones (2008); Burt, Dobler, and Starling (2003); Carr and Smeltzer (2000); J. R. Carter and Narasimhan (1996); Cavinato (1987); Cousins and Spekman

Rank	Skill	Amount	Percentage
1	Negotiation skills	18	62%
2	Problem solving	14	48%
3	Analytical skills	14	48%
4	Leadership skills	13	45%
5	Decision-making	12	41%
6	Computer literacy	12	41%
7	Communication	11	38%
8	Influencing skills	9	31%
9	Strategic thinking	9	31%
10	Technical skills	9	31%
11	Blueprint reading	8	28%
12	Supply chain management	8	28%
13	Conflict resolution	7	24%
14	Cost analysis	7	24%
15	Product knowledge	7	24%
16	Project management	7	24%
17	Ability to work on a team	6	21%
18	Customer focus	6	21%
19	Managing internal customers	6	21%
20	Supplier evaluation	6	21%
21	Time management	6	21%
22	Forecasting	5	17%
23	Listening	5	17%
24	Change management	5	17%
25	Organisational skills	5	17%
26	Persuasive skills	5	17%
27	Specification development	5	17%
28	Strategic supplier development	5	17%
29	Tactfulness in dealing with others	5	17%
30	Understanding business conditions	5	17%

Table 2.1 Top-30: Most mentioned skills in scientific P/SM-skills literature (n = 29)[60]

(2003); (Cousins, Giunipero, Handfield, & Eltantawy, 2006) Cruz and Murphy (1996); Dowd and Liedtka (1994); Eltantawy, Giunipero, and Fox (2009); Faes, Knight, and Matthyssens (2001); L. Giunipero (2000); (L. C. Giunipero & Handfield, 2004) (Giunipero & Pearcy, 2000); (L. Giunipero, Denslow, & Eltantawy, 2005); Keough (1993); Kern, Moser, Sundaresan, and Hartmann (2011); Killen and Kamauff (1995); Knight et al. (2014); Kolchin and Giunipero (1993); McKeefry (1998); Mulder et al. (2005); Muller (2001); Murphy (1995); Pagell, Das, Curkovic, and Easton (1996); Tassabehji and Moorhouse (2008); Trent and Monczka (2003) and Zawawi et al. (2014).

[60] PERFECT (2016), p. 17.

'Negotiation skills' are mentioned most often, followed by *'Problem solving', Leaderships skills', 'Analytical skills', 'Influencing', 'Strategic thinking', 'Technical knowledge/skills', 'Influencing'* et cetera.

Categorisation of purchasing skills

Patterns are visible in the list of skills in table 2.1 when the early work in the skills literature of Kolchin and Giunipero (1993, pp. 839-840) is considered. It identifies three major knowledge themes that purchasers need: *'quality, cost, and supplier management'*[61] and according to them three main skills are important in P/SM:

- ***'Business skills*** *such as market analysis, negotiating with partners, effectively managing internal and external relationships, global sourcing development, change, and planning and organisational skills.*

- ***Interpersonal,*** *including risk taking, written and oral communication, conflict resolution, influence and persuasion, group dynamics, leadership, problem solving, and international and cultural awareness.*

- ***Technical*** *such as cost analysis, product knowledge, computer literacy, total quality management (TQM), and government regulations.*[62]

This work is extended by Giunipero and Pearcy (2000, p. 6), who adapted the following scheme from Killen and Karnauff's work *'Managing Purchasing – making the supply team work'* (1995) the characteristics of a purchasing professional. The characteristics of a purchasing professional are a balanced mix of explicit and tacit knowledge:

[61] See: Pagell et al. (1996), p. 28.
[62] See: Pagell et al. (1996), p. 28.

Characteristics of a Purchasing Professional			
Product knowledge Is knowledgeable about: • Product or materials • Prices • Major sources • Quality issues • Customer requirements	**Principles of Purchasing and Management** Understands: • Overall role of the function • Quality theory • Pricing theory • Inventory control and management • Value analysis • Supply chain management • Make vs. buy • Capital equipment buying • Purchase timing • Value analysis • Negotiation • Knowledge of other functions	**Personal Attributes** • Integrity • Detail-oriented • Likes to do research • Careful and deliberate decision maker • Ability to tolerate conflicts and ambiguity • Takes appropriate risks • High self-esteem • Initiative	**Interpersonal Skills** • Teaming • Listening • Verbal communication • Written communication • Tolerance for conflicting views <u>Manager</u> • Works well with internal and external customers • Reaches workable compromise • Handles conflict effectively • Adept at organizational politics • Maintains a positive mental attitude • Coordinates purchasing department's role with that of the organization
Technical Knowledge • Product knowledge • Purchasing principles • Organization's business • Current trends • Final customer needs • Needs of internal customers	**Analytical Ability** • Identifies and solves problems • Makes sound decisions quickly • Thinks in the abstract •Analyzes various strategic options and their direct potential and indirect impact on the organization		**Managerial** • Planning • Organization • Leadership • Communication • Motivation • Control • Goals and strategies

Table 2.2 Characteristics of a Purchasing Professional[63]

Explicit and tacit knowledge: know-what and know-how

In the scientific P/SM skills literature 'knowledge' has an important first place. Giunipero et al. (1999) distinguish *'expert knowledge (data and analysis)'* and *'tacit knowledge (common sense or intuition)'*[64] and they follow more or less Mihály Polányi's original definition of tacit knowledge: '*We can know more than we can tell'*.[65]

Having (multidisciplinary) knowledge and proceeding in a systematic-methodical manner have roots in the explicit knowledge apart from the procedural or tacit knowledge of 'how-to-apply'. 'Problem solving', 'having team spirit' and 'communicational skills' are soft skills or tacit knowledge, although problem solving may proceed in a systematic-methodical manner.

[63] See: Giunipero and Pearcy (2000, p. 6.)
[64] Giunipero et al. (1999), p. 42.
[65] See: Polanyi (1966), p. 4.

Thus, a skill can be defined as 'know-what', which is 'declarative' or 'explicit' knowledge or a skill can be defined as 'know-how', which is 'procedural' or 'tacit'.[66] Nonaka and Von Krogh (2009) are elaborating further on the concept of tacit knowledge and see a distinction between tacit and explicit knowledge. 'Know-what' is expressed and captured in printed texts and graphs. The theory of 'tacit knowledge' is the basis of the organizational knowledge creation theory and '*covers knowledge that is unarticulated and tied to the senses, movement skills, physical experiences, intuition, or implicit rules of thumb*'.[67] Nonaka & Von Krogh (2009) are giving examples: *knowledge of a solution to a differential equation* is know-what or explicit knowledge.[68] Knowledge of for instance wine tasting or the craft of building a violin are examples of tacit knowledge. Another example of tacit knowledge is the interpretation of *'a complex seismic printout of an oil reservoir'*.[69]

Tacit knowledge: a key to success

Giunipero et al. (1999) did a study on the impact of tacit knowledge on purchasing decisions and they note that purchasing managers are making important decisions with the use of tacit knowledge or what they call: 'common sense'. Purchasers see the importance of explicit knowledge, but they realize that this knowledge is only one source and should be interpreted in the light of their own tacit knowledge. Giunipero et al. (1999), note that purchasing managers use identical amounts of explicit knowledge and tacit knowledge. The use of tacit knowledge is explained by the fact that the majority of decision makers have a limited amount of time to attain, interpret and digest knowledge in the process of making a decision. A purchasing manager has to make multiple decisions each day. Giunipero et al. (1999), make clear that purchasing managers are aware of the fact that they do use tacit knowledge in daily practice.[70]

[66] Nonaka and Von Krogh (2009), p. 635.
[67] See: Nonaka & Von Krogh (2009), p. 635.
[68] See: Nonaka & Von Krogh (2009), p. 637.
[69] See: Nonaka & Von Krogh (2009), p. 635.
[70] Giunipero et al. (1999), p. 49.

2.2 Hofstede's comparative management approach as a means to explain job related country differences

Culture is stable for decades

The attention for Hofstede's Cultural Dimensions is on the rise[71]; his work is cited more than 5.900 times from 1976 till mid 2016 and more than 2.500 times in the period 2012 till mid 2016, i.e. around 43 percent in the past 4,5 years.[72] According to Hofstede *'corporate culture is determined historically and not easily changed. This suggests that top management has little influence on organizational culture'.*[73] The growing interests for Hofstede's work is despite criticism that is measurements were taken during the 1970s and among IBM managers only.[74] Hofstede, however, replicated his work and found the same results for 74 countries and regions as in the IBM study of the 1970s in which he tested different professional populations and the conclusion may be drawn that *'the original results do not seem to depend much on Hofstede's original choice of IBM managers'.*[75]

Hofstede's Cultural Dimensions

Hofstede's model distinguished 4 and later 5 and 6 dimensions: individualism versus collectivism, large versus small power distance, strong versus weak uncertainty avoidance, masculinity versus femininity and long-term versus short-term orientation (and the sixth: indulgence, which is left out in this research), which are set on scales from 0 to 100.[76] The numbers in the Hofstede table unjustly suggest a kind of precision. Hofstede's model can be used to tell that Austria is a 55 and the Netherlands 80 on 'Individualism'. This means that culture in the Netherlands is more individualistic than in Austria. It does not matter if these scores are very accurate or only generally indicative; the ratings provide a clue of how Austria and the Netherlands might differ culturally; in this case on the subject of individualism.[77]

Individualism versus collectivism

This category is about thinking in terms of "*I*" or in terms of "*We*". People in individualist countries are supposed to take care for themselves and their direct family only. People in

[71] Sivakumar and Nakata (2001), p. 556.
[72] Data: Scopus.com (June 30, 2016).
[73] See: C. Carter and Jennings (2004), pp. 153-154.
[74] Batenburg (2007), p. 183.
[75] See: Batenburg (2007), p. 183.
[76] Hofstede (1983a), p. 43; Hofstede (1983b), p. 78 and Hofstede and Minkov (2010), p. 496.
[77] Nardon and Steers (2009), pp. 5-6.

collectivist societies people fit in larger social groups that look after them in exchange for loyalty.[78] The Austrian culture scores '*in the middle*'[79] (55)[80] and has individualistic and collectivistic features. The Netherlands culture however scores very high (80) on individualism and has no collectivist characteristics. In collectivist cultures '*employees are members of an in-group who will pursue the in-group's interest,'* whereas in individualist countries *'employees are "economic persons" who will pursue the employer's interest if it coincides with their self-interest'*.[81] *'Hiring and promotion decisions take employee's in-group into account,*' in collectivism and in individualism these decisions are '*based on skills and rules only'*.[82] *'Many Austrians list "knowing the right people" as the most important factor in advancing one's career*'.[83]

Power Distance

'*All societies are unequal, but some are more unequal than others'*.[84] Hofstede is paraphrasing Orwell[85] with this short explanation of the concept of power distance. '*In organizations, the level of Power Distance is related to the degree of centralization of authority and the degree of autocratic leadership.*[86] The Austrian score is very low on *power distance* (score of 11) and medium low (38) in the Netherlands, which means that in the Austrian culture the power distance is much lower than in the Dutch culture. *'In small-power-distance situations, subordinates and superiors consider each other as existentially equal; the hierarchical system is just an inequality of roles, established for convenience, and roles may be changed, so that someone who today is my subordinate may tomorrow be my boss'*.[87] In both countries power is distributed and managers rely on the experience of their personnel. Team members require to be consulted and not to be controlled.[88] Top managers in Austria *'maintain a sizeable power distance and delegate day-to-day tasks to middle managers, who work harder than they do. Middle managers enjoy authority over the rank and file, but object to the boss' policies at some risk'*.[89]

[78] Hofstede (1983b), p. 79.
[79] See: Hofstede (1983b), p. 81.
[80] This is a score on a scale of 0 to 100.
[81] See: Hofstede et al. (2010), p. 124.
[82] See: Hofstede et al. (2010), p. 124.
[83] See: Lewis (2010), p. 234.
[84] See: Hofstede (1983a), p. 44.
[85] Referring to the novel: Orwell, G. *Animal Farm*, New York: Harcourt, Brace & Co, 1946.
[86] See: Hofstede (1983b), p. 81.
[87] See: Hofstede et al. (2010), p. 74.
[88] Hofstede et al. (2010), p. 77.
[89] See: Lewis (2010), p. 234.

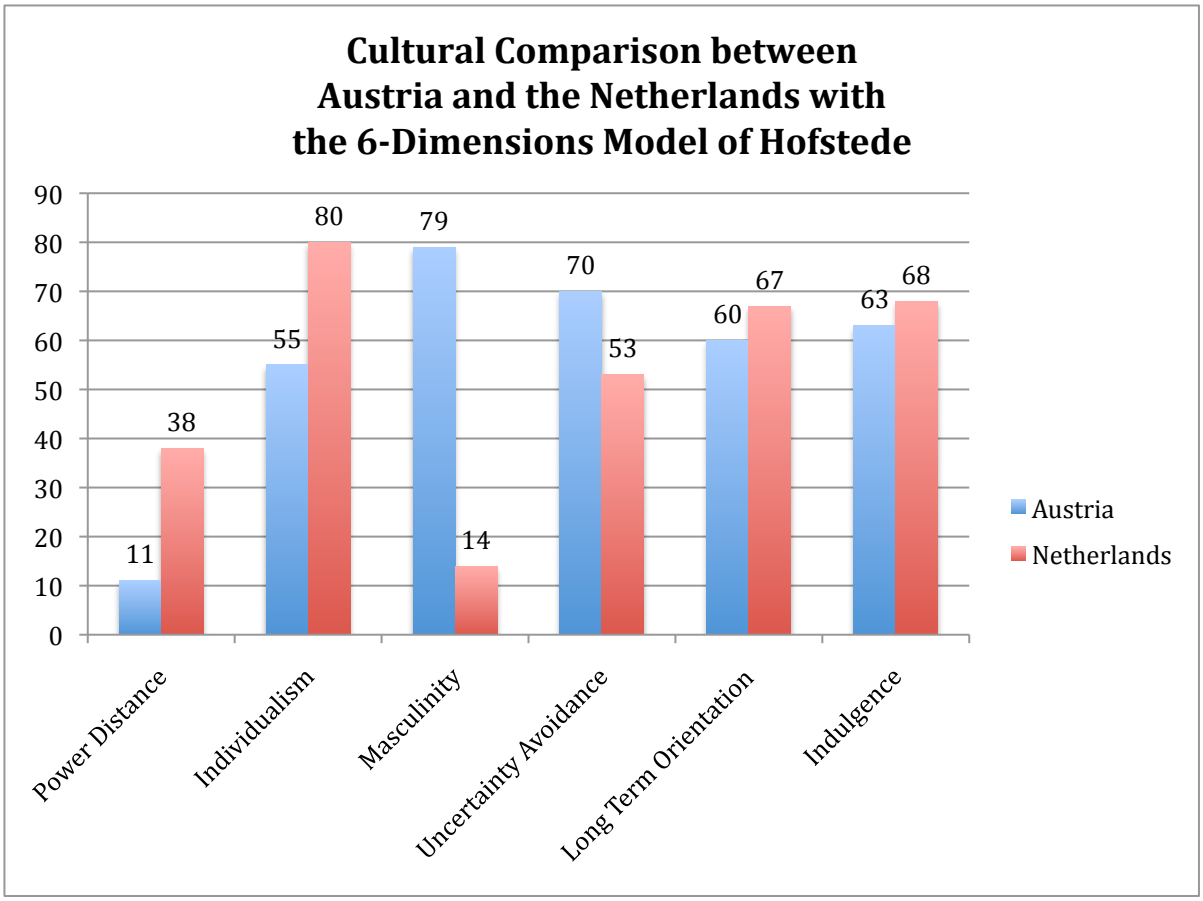

Figure 2.1 Cultural Comparison between Austria and the Netherlands with the 6-Dimension Model of Hofstede[90]

Masculinity

A high masculinity score means that the society is competition-driven. In a masculine society a synonym for having success is 'being the best', whereas in a feminine society the quality of life and doing the things one likes, are synonyms for success.[91] On this point Austria and the Netherlands deviate the strongest. Austria's cultural values are very masculine (79) and the Dutch very feminine (14).[92] Austrian individuals are more success oriented and driven than the Dutch. In the Netherlands people tend to keep the life/work-ratio in balance whereas in Austria people are more inclined to put their work on the first place. Employees in Austria expect that their managers are decisive; while in the Netherlands the Polder Model[93] exists: managers are working towards compromises. *'The hierarchical pyramid in Dutch firms is*

[90] See: The_Hofstede_Centre (2016a), "Austria in comparison with the Netherlands".
[91] Hofstede (1984), p. 390.
[92] Hofstede et al. (2010), p. 152.
[93] Woldendorp and Keman (2007), p. 317.

decidedly flat: managers sit with other executives and decisions are made after lengthy consultation and consensus.'[94]

Uncertainty Avoidance

Hofstede's definition of uncertainty avoidance is: '*The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these'*.[95]

Austria scores 70 and the Netherlands 53 on uncertainty avoidance and thus both have a certain preference for avoiding uncertainty. A high score means that the society maintains strict codes of belief and ways of behaving. A high score implies intolerance towards unorthodox behaviour and ideas. Austrians are more punctual than the Dutch, and the Austrians have more resistance towards innovation, and security is an important element in individual motivation.[96] The use of academic titles is an indication of Austria's high score in this category.[97]

Long Term Orientation

'Long- versus short-term orientation, (...) a national value dimension became Hofstede's fifth dimension of national cultures'[98] and is based on the teachings of Kong Fu Zi (Confucius). This dimension describes '*societies preference for traditions or not. The societies that score low have a preference for'* traditions and norms and dislike societal change.[99] High scores are found in countries that face the future and embrace thrift and efforts in modern education. *'Long- and short-term-oriented cultures seem to represent two different ways of thinking, which can be characterized with the opposing labels 'virtue' versus 'truth', or 'synthetic' versus 'analytical'.'*[100]

The Austrian score is 60 and the Dutch 67 and both can be defined as pragmatic. In pragmatic societies the truth is seen as contextual. Traditions are transformed to changed conditions.[101] Both countries, but the Netherlands somewhat more, can be considered at the side of being pragmatic and short term oriented.[102]

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[94] See: Lewis (2010), p. 246.
[95] Hofstede and Minkov (2010), p. 493.
[96] The_Hofstede_Centre (2016a), "Austria in comparison with the Netherlands".
[97] Chroust (2007), p. 8.
[98] Hofstede and Minkov (2010), p. 493.
[99] See: The_Hofstede_Centre (2016a) "Austria in comparison with the Netherlands".
[100] See: Hofstede and Minkov (2010), p. 497.
[101] The_Hofstede_Centre (2016a) "Austria in comparison with the Netherlands"
[102] Lewis (2010), p. 234 & p. 247.

Indulgence

This dimension indicates to what extend the members of the society can restrain and be moderate and can avoid indulgence or exorbitant behaviour. Austria and the Netherlands seem to be indulgent countries: the members of both societies exhibit an eagerness to realise *'their impulses and desires with regard to enjoying life and having fun'*. Indulgence is associated with a positive and optimistic attitude.[103]

Austria versus the Netherlands

There are more similarities than differences between the two countries. The apparently paradoxical situation in Austria is that (business) culture is highly hierarchical, but that power distance is very low, lower than in the 'hierarchical flat' Netherlands. Austria has features of a collectivist and individualist society. Much more than in the Netherland in Austria it is considered to be helpful to know influential persons as an entry to get a good job or position. The Austrian culture is very masculine: work goes for private life, whereas the Dutch balance life at home and at work.

	Austria	**The Netherlands**
Power distance	Very low distance	Medium low distance
Individualism	Between collectivism and individualism	High in individualism
Masculinity	Very high in masculinity	Very low in masculinity (= femininity)
Uncertainty Avoidance	High on uncertainty avoidance	In between certain and uncertain
Long Term Orientation	Both: rather a long term orientation	
Indulgence	Both: indulgent	

Figure 2.2 Recapitalising the differences in Austrian and Dutch culture[104]

[103] See: (Hofstede et al., 2010), p. 281.
[104] The_Hofstede_Centre (2016a), 'Austria in comparison with the Netherlands'

2.3 Hofstede and research in the P/SM field

International comparisons and Hofstede

Hofstede's work is cited broadly; also in the P/SM field. Kaufmann and Carter (2006) did a comparison of the German and US practices towards international supply relationships and non-financial performance. And they found that *'German managers, who have a higher level of uncertainty avoidance, are less comfortable in situations of high item related dynamism than are U.S. managers'.*[105] Zsidisin, Wagner, Melnyk, Ragatz, and Burns (2008) also compared Germany and the US. The German and US supply management professionals share a large number of similarities, however *'German supply management professionals appear to generally have greater concern for factors that can create uncertainty in ensuring supply continuity and price volatility.' 'These results seem to support the work of Hofstede (2001) in a supply management context with regard to uncertainty avoidance'.*[106]

Tadepalli et al. (1999) did a survey comparing American and Mexican purchasing professionals in ethical issues and found significant differences that were explained with Hofstede's model of Cultural Dimensions. Mexican purchasers tend to give *'preferential treatment to suppliers that happen to be good customers, obtaining information about competitors from suppliers, giving importance to a salesperson's personality, and soliciting unnecessary quotations'.*[107] The Cultural Dimension of Uncertainty Avoidance in Mexico is high (82) and medium in the US (46).[108] As a result Mexican purchasers are using *'their position to reduce the uncertainty associated with their job by acquiring, using, and passing along information'*. The power distance is high in Mexican culture. Owners of businesses and workers are on both sides of Mexican society '*and nepotism is an accepted way of doing business';* therefore purchasing managers are expected to strengthen relationships with suppliers, because in a '*collective society, the identity and worth of the individual is rooted in the social system, it is not surprising that'* the Mexican purchasers *'seemed to feel that such actions were acceptable to their society and hence to them'.*[109]

Lin & Ho (2009) compared also ethical reasoning of purchasers between two countries: Taiwan and China. Both Confucian countries differ in Hofstedian terms in Power Distance

[105] See: Kaufmann and Carter (2006), p. 669.
[106] Zsidisin et al. (2008), p. 409.
[107] See: Tadepalli et al. (1999), pp. 376.
[108] Tadepalli et al. (1999), pp. 376 and The_Hofstede_Centre (2016b), 'Mexico in comparison with United States'.
[109] See: Tadepalli et al. (1999), pp. 376.

(Taiwan: 58 / China: 80) and therefore the less mature moral standard of Chinese purchasing managers compared with the Taiwanese could be explained. Chinese purchasers '*focus more on (...) norms, which have been established by external groups such as society and peer groups'* and they are *'predominantly concerned with mutually satisfying outcomes and group harmonization during the purchasing negotiation process'*.[110]

Hypotheses

Considering the largest difference between the Austrian and Dutch: the very high Austrian and low Dutch scores on the Cultural Dimension of Masculinity. The Austrian culture is highly target oriented, while the Netherlands' culture is characterised by feminine features that emphasise on relationship matters. This eye-catching difference leads to these hypotheses:

- H1a: Austria as a country with a masculine culture will emphasise more on target orientated job skills.

- H1b: the Dutch feminine culture will lead to more on relationship orientated job skills.

Hofstede (1983b, p. 81) states that Austrian culture has features of medium-collectivism and that Dutch culture is individualistic. The Netherlands' score very high (80) in Individualism, whereas the Austrian has semi-collectivistic features: with a rate of 55 it scores somewhere 'in the middle'.[111] In Austrian culture '*employees are members of an in-group who will pursue the in-group's interest,'* whereas in Dutch culture *'employees are "economic persons" who will pursue the employer's interest if it coincides with their self-interest'*.[112] Lewis (2010) supports the idea that Austrians depend on their social networks: *'Many Austrians list "knowing the right people" as the most important factor in advancing one's career*'.[113]

The Austrian culture is distinctive collectivistic compared with the Dutch, however it is not only 'medium-collectivistic' but hence also 'medium-individualistic' if compared with more collectivistic cultures like Portugal (27)[114] or Russia (39).[115] In a highly individualistic

[110] See: Lin and Ho (2009), p. 206.
[111] Hofstede (1983b), p. 81 and Kale (1995), p. 40.
[112] See: Hofstede et al. (2010), p. 120.
[113] See: (Lewis, 2010), p. 234.
[114] Correia Loureiro, Rüdiger Kaufmann, and Rabino (2014)

culture, as in the Netherlands, the inhabitants prefer a '*loosely-knit social framework in which individuals are expected to take care of themselves and their immediate families only'*.[116] '*The employer/employee relationship is a contract based on mutual advantage, hiring and promotion decisions are supposed to be based on merit only, management is the management of individuals',* while loyalty in collectivist cultures is stronger than other societal rules and regulations.[117]

In an almost similar setting Fischer (1999) explains Spanish – Dutch differences with the deviating levels of individualism; Spain has a similar score (51) as Austria (55) and it seems to be reasonably defendable that (semi-) collectivistic and individualistic vocabulary will be found in respectively Austrian and Dutch job ads.

These above mentioned important differences lead to hypotheses H2a and H2b:

- H2a: the Austrian semi-collectivistic culture will emphasise more on fit-in-group related job skills.

- H2a: the individualistic culture of the Netherlands will emphasise more on self-development skills.

[115] Keplinger, Feldbauer-Durstmüller, and Mitter (2012)
[116] See: Hofstede (1980), p. 45.
[117] See: The_Hofstede_Centre (2016a) (website).

3. Method and data

This chapter describes the methods to categorise and to map job requirements from multiple sources, how to compare datasets from different countries and how the Austrian and Dutch datasets were collected and were compared.

3.1 Sorting purchasing skills in general

Categorising, comparing, and mapping different and equal/synonym skills

The challenge was to map the P/SM skills that were found in online P/SM job advertisements in Austria and in the Netherlands and in the scientific P/SM literature. In the literature and job adverts between 200 and 300 different synonyms for a smaller amount of skills and competencies were found. A method to group up equal skills and competencies is necessary in order to compare one source with another. A possible solution was found by using an existing skills model - KODE®X – which categorizes skills and competencies into 4 different skill-groups, 16 underlying skill-subgroups and 64 underlying skill-sub-subgroups. In this paragraph an analysis is made of forms of mapping skills for the use of comparing to be able to find core competencies.[118]

Examples of categorising, comparing, and mapping of skills in literature

Other scholars have described their research in comparing skills from multiple sources and in reducing the number of skills by grouping up similar skills in categories. Norback and Forehand (1995, p. 1.) analysed the skills that are needed for 18 different kinds of jobs. This research is defined as a '*job literacy analysis'* or a '*systematic and comprehensive process for identifying requirement of jobs'*. Norback and Forehand (1995, p. 1.) developed an empirically based list skills and a way of a categorization into 23 skills groups to compare '*the job literacy skills identified to date with general adult literacy skills. A further analysis explores complexity as a descriptor of the literacy required by jobs*'.

[118] Prahalad and Hamel (2006), p. 83.

Xiao (2006, p. 374) sees the need for matching both job skills and job requirements in China and notes that a *'uniform but vague list of desirable skills often provided by policymakers or advocated by scholars is used as a guide in education and training programs in China'*. The work of Xiao (2006) has similarities with the research of Norback and Forehand (1995). It uses survey data to analyze the most important skills that employees in China believe to be important in performing job routines in '*different jobs, different industries, and different geographical regions'*.

Xiao (2006, p. 376) surveyed more than 25.000 employees from about 400 randomly chosen companies in different regions of China. Xiao (2006, p. 376) found 20 different job skills that were deduced from the interviews and were categorized in 5 groups of skills that were identified by the employees: *'dispositional characteristics, technical know-how skills, job basics, problem solving, and communication'*. The aim of the study of Xiao (2006, p. 376) was to investigate if employees in different jobs levels *(for example, managerial, professional, salesperson, frontline workers)* have different perceptions of required job skills. Norback and Forehand (1995) and Xiao (2006) derived skills from their empirical studies and reduced them to 18 and 20 categories.

Shou and Wang (2015, p. 1) examined 900 online P/SM job advertisements in North America (US & Canada), Asia (China, India, Malaysia and Singapore) and the UK. Shou and Wang (2015, p. 1) were using keyword-coding method. They used QSR NVivo 8.0 to encode the keywords from the job ads. Norback and Forehand (1995), Xiao (2006) and Shou and Wang (2015) derived skills from their empirical studies and reduced them to 18, 20 and 75 competencies and their studies are aimed to find core competencies.

3.2 Sorting purchasing skills with KODE®X

The concept of core management competencies is developed by Prahalad and Hamel (2006, p. 83). Three decisive factors make a competency a core competency. The first distinction is that a core competency makes it possible to access a wide range of markets. Second it contributes importantly to the perceived customer benefits of the end product and last: it is inimitable.[119]

[119] Prahalad and Hamel (2006), p. 83.

KODE®X – a reversed use of categorising skills

To develop competency levels in an international industrial company the individual employee competency development should be optimized.[120] In the Germanic countries Erpenbeck, Heyse and Von Rosenstiel have been working further on the idea's of core competencies of Hamel and Prahalad,[121] which resulted in KODE®X, a model that assesses, measures and diagnoses individual competencies.[122] This competency model is based on the differentiation of the four central competencies: 'personal', 'activity and action', 'social-communicative', and 'methods and professional' competencies.[123] These 4 groups are noted with the capitals P, A, S and M. Underneath these four skill-groups are divided in 16 skills-subgroups and 64 underlying skill-sub-subgroups.

KODE®X is actually an instrument for assessing individual competencies supporting a company's strategy-oriented competency development and is a workable competency management system that has proven itself widely in practice.[124] A possible solution for comparing Austrian and Dutch job ads in this research was found in the reversed use of KODE®X, a model which categorizes skills and competencies into 4 different skill-groups: personal, activity & action, socio-communicative and methods & professional competencies. With the 'reversed use' is meant that the KODE®X categorisation is used to map and classify different and similar/synonym skills and competencies. On the next page in figure 3.1 the scheme of KODE®X skill groups and the layers underneath are displayed.

[120] Kuhlmann and Sauter (2008), p. 33.
[121] Erpenbeck and Ring (n.d.), p. 1.
[122] Zehrer and Mössenlechner (2009), p. 270.
[123] Heyse, Erpenbeck, and Max (2004), p. 58.
[124] Kuhlmann and Sauter (2008), p. 33.

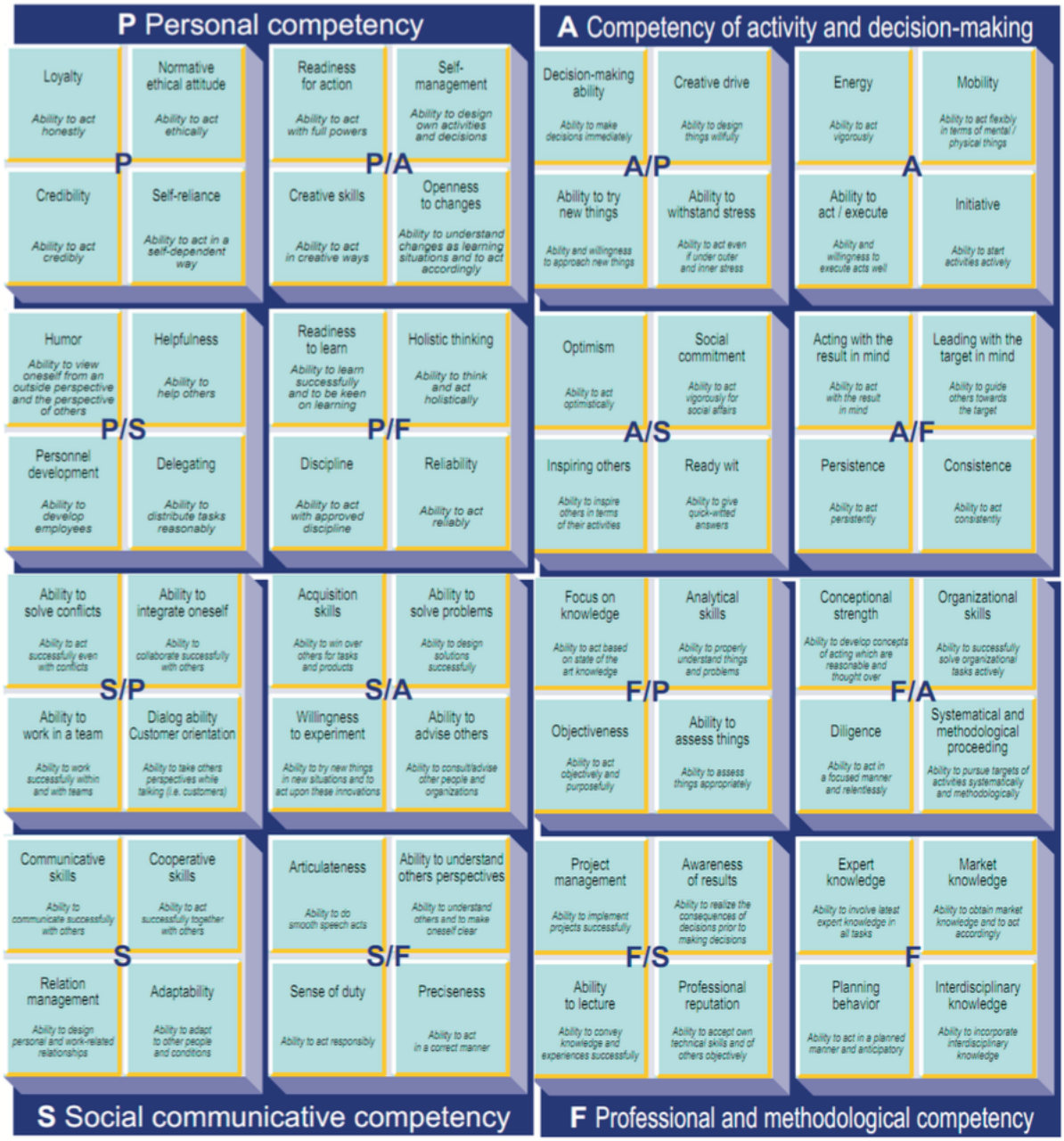

Figure 3.1 The KODE®X grid[125]

The reversed use of KODE®X – an example

This KODE®X grid was used to map virtually eponymous skills and competencies to one particular term. To give an example: in the right upper box named 'A' the second from the left is called 'Energy'. A selection of found synonyms in the job ad texts are for instance: '*having energy', 'being resolute', 'taking decisive action', 'being an energetic candidate', 'having a drive',* and *'manage to succeed the job'*.

[125] © 2009 Prof. Dr. V. Heyse, Prof. Dr. J. Erpenbeck (adam-europe.eu). Kuhlmann and Sauter (2008), p 38. (German version)

All the synonym competencies were mapped in the best possible box and were coded with the skills title and the associated capital. In the case of the example this would be: 'A' (1 out of 16 different sub-skills) and also 'Energy' (1 out of 64 different sub-sub-skills) in order to be able to analyse the results in the progress of the research. Just stating 'A' would be insufficient, because this method would group up 'Energy' with 'Proactive', 'Mobility', and 'Disposed to performance' to a too wide distinction of skills; there is a difference between being disposed to performance, having an energy drive et cetera.

Data selection via online platforms

The data set of the 99 Austrian P/SM job advertisements was found on the Austrian online job portal www.karriere.at in October and November 2015. The 99 Dutch online P/SM job adverts were found on the online job platforms www.nevi.nl, www.monsterboard.nl and www.intermediair.nl/vacature. All vacancies came from the field of purchasing and supply management. The mapping and coding into KODE®X was done in Excel. The reason why in each country a number of 99 job ads were found has to do with a human error whereby 1 of the 100 Austrian ads was lost. Subsequently, also 99 Dutch ads where selected.

Inspection of the datasets

After the coding into the 16 KODE®X skill-subgroups and 64 underlying groups the data was analysed first in the different Excel and SPSS spreadsheets to calculate frequencies and reliabilities. The outcomes, the similarities and differences were analysed on the underlying details, i.e. on the 64 KODE®X skills-subgroups levels that lie underneath the 16 skills-groups. This analysis is important to obtain a more detailed view. In some cases skills-subgroups were divided for a detailed view for instance in the relative large skills-group 'Methods and Professional skills'. Other, similar skills-(sub)groups were grouped up, for instance 'reliability' and 'honesty' were grouped up as 'trustworthiness'.

Comparing the proportions

The percentages of the times an Austrian and Dutch employers mention a skill were calculated into a proportion. This means that if x-% of the employers mention ad skill, the proportion will be x divided by n (the number of observations: 99): x / 99.

For the Austrian and Dutch proportions a z-test was performed using the following formula:[126]

- $$z = \frac{p_A - p_{NL}}{SE}$$

- $$P_{pooled} = \frac{p_A n_A + p_{NL} n_{NL}}{n_A + n_{NL}}$$

- $$SE = \sqrt{p_{pooled}(1 - p_{pooled})(\frac{1}{n_A} + \frac{1}{n_{NL}})}$$

- p_A Austrian proportion per skills-group from 0 to 1
  p_{NL} Dutch proportion per skills-group from 0 to 1
  n_A Austrian total number of observations ($n_A = 99$)
  n_{NL} Dutch total number of observations ($n_{NL} = 99$)
  SE Standard Error

[126] Hair (2010), p. 533.

4. Results: difference and similarities

In this chapter the results are presented. Paragraph describes the frequencies, the shows the results: the significant differences and common grounds.

4.1 Frequencies in the data sets

Both sets contain the same amount of observations: 99 Austrian and 99 Dutch online P/SM job advertisements. In table 4.1 is shown that on average the Austrian job ads ask for about 11 skills and competencies and the Dutch almost 15. The histograms in figure 4.1 support this with the image: the Austrian average is lower. The Dutch ads ask for more skills; in some cases the total of demanded skills exceeds the 25 and even 30 per ad. The Austrian advertisements vary from 4 to 21 requirements per ad and the Dutch between 5 and 33 competencies per ad. Some employers name 4 or 5 competencies and others demand up to 33 skills.

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	SE
Σ Dutch skills	99	5	33	1470	14,8485	5,40288	29,191	1,084	,481
Σ Austrian skills	99	4	21	1097	11,0808	3,31871	11,014	,449	,481

Table 4.1 Descriptive statistics - 99 Austrian and 99 Dutch online P/SM job advertisements

As shown in table 4.2 about 84 percent of the total job ads are focused on seniors and both 8 percent on juniors and executives. In Austria these figures are 80 percent (seniors), 9 percent (juniors) and 12 percent (executives) and in the Netherlands: 87 percent (seniors), 8 percent (juniors) and 5 percent (executives).

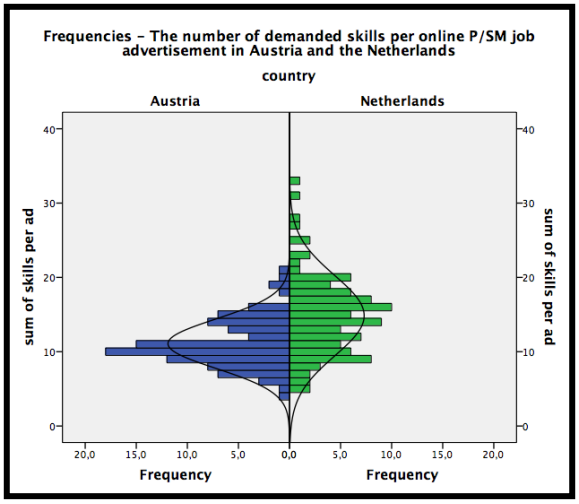

Figure 4.1 Histograms of the frequencies of demanded number of skills in Austrian and the Netherlands job advertisements.

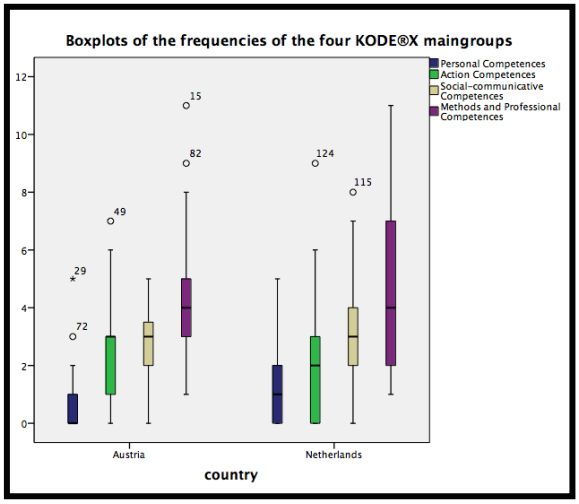

Figure 4.2 Boxplots of the frequencies of the four KODE®X main groups

	Junior level		Senior level		Executive level		Total
Austria	9	9%	78	80%	11	12%	99
Netherlands	8	7%	86	87%	5	5%	99
Total	17	8%	166	84%	17	8%	198

Table 4.1 Junior, senior and executive job ads in Austria and Holland

In Appendix 2 the scores in the 16 KODE®X skills-groups and the underlying skills-subgroups are displayed.

4.2 Differences and similarities in both datasets

In this section the results of the significant differences and similarities -based on the *z*-value- are displayed. In the right column of the tables the significant differences already are explained. A more elaborate explanation is found in the discussion chapter.

The results are grouped on their *z*-value from high to low. Due to the calculation method the significant differences at the Austrian side are positive (high) and at the Dutch side negative (low). The first table displays the common grounds. The second shows the structurally or institutionally explained differences and the third the culturally explained differences.

Common grounds					
Similarities - no significant difference between the Austrian and Dutch proportions (A = NL)					
	Austria	Nether-lands	*z*-value	P-value	*P > α (α = 0,01)* - (equal proportions)
Computer literacy - ERP: SAP & EXACT	45%	30%	2,1975	0,0143	Common ground – in total Computer literacy is significantly more demanded in Austria. This specific category (ERP) has equal proportions when the Alpha is set on 0,01.
					P > α (α = 0,01 ∧ 0,05) - (equal proportions)
Being decisive	9%	4%	1,4346	0,0764	Common ground: Decisiveness is needed for the purchasing job.
To motivate	2%	0%	1,4210	0,0778	Common ground: in Austria and in the Netherlands there are equal proportions (null hypotheses are not rejected) for these categories. There is evidence that there is Austro-Dutch accordance towards the skills that a successful purchaser needs: **Hard skills / explicit knowledge:** - BSc or MSc degree - knowledge of ERP, SAP etc. **Soft skills / tacit knowledge:** - having experience with: - P/SM in practice *(including experience with hard skills: ERP, SAP etc)* - project/process management - being effective and proactive - having team spirit - having overview and being a holistic thinker - carrying responsibility - being trustworthy
Being trustworthy: reliable and honest	7%	5%	1,0100	0,2776	
Having team ability	39%	35%	0,5956	0,3557	
Holistic thinking	11%	10%	0,5875	0,4090	
Having the capacity to overview	11%	10%	0,2308	0,4090	
Having experience in process management	4%	4%	0,2308	0,5000	
Having experience in project management	7%	8%	0,0000	0,3974	
Having experience in the P/SM field	91%	93%	-0,2685	0,2912	
Being (sole) responsibility	10%	15%	-0,5544	0,1446	
Having a MSc/BSc degree in P/SM	0%	2%	-1,0698	0,0778	
Being effective	66%	76%	-1,4214	0,0582	
Being proactive	16%	25%	-1,5779	0,0582	
Having a BSc or MSc degree *(corrected figures)*	85%	92%	-1,5784	0,0537	*This is a corrected number. In 12% of the cases the Austrian job ads were unspecified and did not ask for any form of education explicitly. The Dutch ads did not specify in 2% of the cases. The remaining parts (88% of the Austrian and 98% of the Dutch job ads) were set to 100%. Without this correction the Dutch job ads ask significantly more BSc or MSc degrees.*

Table 4.2 - Common grounds where employers in Austria and the Netherlands agree

The results in table 4.2 are ranked on their importance in table 4.3:

Common grounds		
	Competencies	Average A & NL
1	Having experience in the P/SM field	92%
2	Having a BSc or MSc degree *(corrected figures)*	89%
3	Being effective	71%
4	Computer literacy - ERP: SAP & EXACT	38%
5	Having team ability	37%
6	Being proactive	21%
7	Being (sole) responsibility	13%
8	Holistic thinking	11%
9	Having the capacity to overview	11%
10	Having experience in project management	8%
11	Being decisive	7%
12	Being trustworthy: reliable and honest	6%
13	Having experience in process management	4%
14	To motivate	1%
15	Having a MSc/BSc degree in P/SM	1%

Table 4.3 Ranking of 15 common grounds

Structurally or intitutionally explained significant differences					
Dissimilarities - Austria significantly higher (A > NL)					
	Austria	**Nether-lands**	**z-value**	**P-value**	**P < α (α=0,05) - (unequal proportions)** Institutional explanation
English language proficiency	**94%**	56%	6,3016	<0,00001	Institutional or structural explanation: the English Proficiency Rate in Austria is lower.[127]
Having a technical 'or' business education	**39%**	3%	6,2582	<0,00001	Institutional or structural explanation: (MSc, BSc or vocational) Austrian industry is 28,0% of GDP and in the Netherlands 18,8%. The Austrian GDP per capita is $47.300 and $49.200 per capita in the Netherlands. The added value by the industry per capita is substantially higher in Austria. This explains the higher demand for technically trained personnel on all levels: vocational (secondary) schools and universities (of applied sciences).
Having had "a technical education"	**43%**	13%	4,7339	<0,00001	
Computer literacy - Total	**61%**	35%	3,6971	0,00001	Institutional or structural explanation: the Internet penetration in Austria in 2016 is 11 years behind the Netherlands.
MS Office	**37%**	17%	3,1914	0,00001	
Dissimilarities - Netherlands significantly higher (A < NL)					
Having French language proficiency	0%	**5%**	-2,2648	0,0119	Institutional or structural difference - Trade connections with France & Belgium. Austrian export to France is 4,6% of the total Austrian export in 2012 and 8% of the total Dutch export is exported to France.
Having a BSc or MSc degree	75%	**93%**	-3,3246	0	*This is an uncorrected number. In 12% of the cases the Austrian job ads were unspecified and did not ask for a form of education explicitly.*
Being educated in business administration or business economics	4%	**28%**	-4,6335	0	Institutional or structural explanation: The added value by the service sector per capita is substantially higher in the Netherlands This explains the higher demand for personnel that is educated in business administration and business economics on all levels: vocational (secondary) schools and universities (of applied sciences).
Having German language proficiency	0%	**30%**	-5,9462	0	Institutional or structural explanation: Germany is the Netherlands trade partner nr 1. About 23% of the Dutch export value is exported to Germany in 2015
Having Dutch language proficiency	0%	**43%**	-7,4114	0	Institutional or structural explanation: Dutch is obviously not required in Austrian (P/SM) jobs.
Having passed a NEVI course	0%	**49%**	-8,0693	0	Institutional or structural explanation: NEVI is the Dutch Association for Purchasing Management that offers a number of professional courses.

Table 4.4 – Structurally or institutionally explained significant differences in Austrian and Dutch job ads

[127] See: EF_EPI (2015), p. 12.

Culturally explained significant differences – part 1					
Dissimilarities - Austria significantly higher (A > NL)					
	Austria	Nether-lands	z-value	P-value (1-P)	**P < a (a=0,01) - (unequal proportions)** Cultural explanation
Being success-driven	51%	8%	6,6814	<0,000001	Cultural explanation: the Austrian culture is considered to be highly **'masculine'** in the theory of Cultural Dimensions of Geert Hofstede. 'Being success-driven is a masculine feature (Hofstede, 1983a, p. 46).
Having the ability to negotiate	63%	35%	3,9799	<0,00004	Cultural explanation: the Austria is **'masculine'**. 'Being assertive', 'being success-driven' and 'achieving something visible' are **'masculine'** features (Hofstede, 1983a, p. 46).
Being devoted, committed and motivated	19%	2%	3,9236	<0,00005	Cultural explanation: the Austrian culture is considered to be more **'collectivistic'** and hence less 'individualistic' than the Dutch culture. People in collectivist cultures work to live and therefore they have to be 'devoted'. In collectivistic cultures the concept of 'we' is stronger than 'I' (Hofstede, 1983a, p. 46).
Being independent	30%	9%	3,7525	<0,00009	Cultural explanation: the Cultural Dimension **'power distance'** scores very low in Austria and 'in between' in the Netherlands. 'Being independent' is a feature of low power distance (Hofstede, 1983a, p. 44.) and fits to the Austrian situation.
Ability to handle stress	29%	11%	3,186	0,00001	Cultural explanation: the Austrian culture is considered to be more **'collectivistic'** and hence less individualistic than the Dutch culture. (See 'being devoted') Work stress can be associated with the conflicts of interests; for instance between professional and private life. (Semmer & Meier, 2003, p. 91).

Table 4.5 – Culturally explained significant differences in Austrian and Dutch job ads – Austrian culture

Culturally explained significant differences – part 2					
Dissimilarities - Netherlands significantly higher (A < NL)					
	Austria	**Nether-lands**	**z-value**	**P-value**	**P < α (α=0,05) - (unequal proportions)** Explanation
Being persistent	0%	4%	-2,0205	0,0217	Cultural explanation: 'Being persistent' is a feature of the Cultural Dimension 'long term orientation' (LTO). The Netherlands score somewhat higher than Austria on LTO.[128] This might explain the slight difference.
Humour	0%	4%	-2,0205	0,0217	Cultural explanation: 'femininity'.
					P < α (α=0,01) - (unequal proportions)
Having social manners and diplomacy	0%	11%	-3,4128	0,0003	Cultural explanation: 'femininity'.
Being creative	0%	13%	-3,7301	0	Cultural explanation: Having a creative mind supports the higher level of individualism in the Netherlands. In the Cultural Dimension of a high level of individualism leads to a high level of creativity.[129]
Ability to advise	0%	13%	-3,7301	0	Cultural explanation: the emphases on (maintaining) relationships, interpersonal communication with people are feminine features (Hofstede, 1983, p. 46.) Advising can be seen as 'helping others', which is a also feminine feature (Hofstede, 1983, p. 46.)
Being communica-tive	39%	66%	-3,8447	0	
Capacity to manage personnel	0%	14%	-3,8814	0	
Maintaining professional relationships	0%	15%	-4,0286	0	
Customer-oriented	10%	35%	-4,2396	0	
Having the ability to break down and solve problems	11%	44%	-5,2360	0	Cultural explanation: The Dutch long-term orientation scores higher on pragmatism. The feminine character of the Dutch culture explains this significant difference.
Open towards change	0%	17%	-4,3124	0	Cultural explanation: 'femininity'.
Power of persuasion	4%	35%	-5,5394	0	Cultural explanation: 'femininity'
Having a flexible mind	0%	27%	-5,5913	0	Cultural explanation: Flexibility is strongly related with individualism.[130] The Netherlands has a high score on individualism and this significant difference is therefore supported.

Table 4.6 – Culturally explained significant differences in Austrian and Dutch job ads – Dutch culture

[128] Hofstede (1983a), p. 46.
[129] Rinne, Steel, and Fairweather (2013), p. 129; Zha, Walczyk, Griffith-Ross, Tobacyk, and Walczyk (2006) p. 355; Saad, Cleveland, and Ho (2015); p. 578 and The_Hofstede_Centre (2016a).
[130] Hofstede and Minkov (2010), p 498.

5. Discussion & conclusion: challenging the "European purchaser"

In the next paragraphs the following research questions and assumptions are answered and hypothesis are tested:

§5.1.1 Research question 1: What are the corresponding requirements in Dutch and Austrian purchasing job advertisements?

Assumptions of the PERFECT project:

- There is a negligible number of P/SM academic curricula in Europe[131]
- Employers hire academic graduates from other fields than P/SM like marketing, finance and HRM to train them to be qualified purchasers.

§5.1.2 Research question 2: What are the culturally induced differences in requirements demanded in Dutch and Austrian purchasing job advertisements? Because of the corresponding, cultural subject, also the hypotheses will be tested:

- H1a: Austria as a country with a masculine culture will emphasise more on target orientated job skills.
- H1b: the Dutch feminine culture will lead to more on relationship orientated job skills.
- H2a: the Austrian semi-collectivistic culture will emphasise more on fit-in-group related job skills.
- H2a: the individualistic culture of the Netherlands will emphasise more on self-development skills.

§5.1.3 Research question 3: What are the institutionally induced differences in requirements demanded Dutch and Austrian purchasing job advertisements?

[131] Lappeenranta University of Technology in Lappeenranta, Finland and the University of Twente in Enschede, the Netherlands are the only two public universities who offer a P/SM curriculum. Audencia Business School in Nantes, France and Politecnico di Milano in Milan, Italy are private schools

5.1.1 Common ground: purchasing experience and hard skills: the corresponding requirements in Dutch and Austrian purchasing job advertisements

Universal P/SM job ad:

Employers need *BSc degree* personnel that have experience with:

- *P/SM in practice,*
- *ERP, SAP and Exact,*
- *Process and project management.*

The ideal purchaser is a *'team player'* that is *'effective'*, *'trustworthy'* and *'responsible'*. Furthermore a purchaser has *'overview'* and is a *'holistic thinker'*.

This paragraph answers research question 1: *What are the corresponding requirements in Dutch and Austrian purchasing job advertisements?*

Skill № 1 is '*having experience*' in the field

The Austrian and Dutch employers agree upon 15 requirements for a purchaser to fulfil (see table 4.2). *'Having experience with P/SM in practice'* is the most mentioned common ground in Austrian and Dutch P/SM. Employers in 92 percent of the cases (Austria 91 percent and the Netherlands 93 percent) explicitly demand for personnel that have gained experience in the field. This number is spread equally over the three levels: junior, senior and executive. In other words: even for junior level jobs in most cases experience is required. Along with experience in the field comes the skill of having knowledge of P/SM related computer programs like *'ERP, SAP and Exact'* and having experience with process and project management.

Employers are not very specific in educational requirements

Employers ask for applicants with *'a BSc or MSc degree',* obviously this can be seen as a very common category. It does not reveal whether the applicant needs a BSc or an MSc or in which field: 'technical' or 'business'? However many employers just ask for *'having college*

level', without stating if a diploma is needed or that a college thinking level is sufficient. If a diploma is required it is not made clear in the job ads in which discipline.

The figures for this category *'having a BSc or MSc degree'* are corrected and through this correction the similarity is made visible. In 12 percent of the cases the Austrian job ads did not ask for any form of education explicitly. The Dutch ads did not specify in 2 percent of the cases. The remaining parts (88 percent of the Austrian and 98 percent of the Dutch job ads) were set to 100 percent. Without this correction the Dutch employers ask significantly more BSc or MSc degrees in P/SM job ads.

Employers demand for the greater part soft skills

'Being effective' is another, often mentioned common ground. This means that the candidate must be goal or result oriented: a skill that seems to be not only a common ground for P/SM jobs. It is likely to be a general competency for jobs in general, just like the *'having an BSc or MSc degree'*.

Being on a team is apparently the standard within firms. The P/SM job is not a solo job (anymore). Firms are looking for *'team players'*. These *'Team players'* need to be *'trustworthy'* and *'responsible'*. About *'trustworthy'*: the scores of both *'being reliable'* and *'being honest'* scored significantly different respectively in favour of Austria and of the Netherlands. After joining those two terms under the umbrella-term *'trustworthiness'* the difference became insignificant. Nonetheless, *'reliability'* and *'honesty'* do have different meanings. *'Reliability'* says that one can depend on that person and *'honesty'* is about telling the truth and behaving in a truthful, integer way. The aggregation of these two terms under the umbrella of *'trustworthiness'* is supported by Giunipero and Pearcy (2000), who see the importance of '*integrity'* in their comprehensive research.[132]

It is important for P/SM professionals to have *'overview'* as well as *'being a holistic thinker'*. Employers seem to like multidisciplinary P/SM personnel that understand the context of the P/SM function within the company and oversee the issues as well as in the P/SM function as in the neighbouring functions like operations, logistics, finance et cetera. This means that

[132] See: Giunipero and Pearcy (2000), p. 6.

future P/SM academic curricula need to be designed in accordance with this notion: the context of the P/SM function within a company should be an important issue in curricula.

One PERFECT assumption is supported, another one is not

On average in 2 percent of the cases a BSc/MSc degree in a P/SM curriculum is demanded. This number seems to support the assumption of the PERFECT project that the PS/M curricula are not numerous.

The assumption made by the PERFECT project that employers hire inexperienced graduate students (MSc) to train them in the P/SM field seems not to be supported by this research. In more than 80 percent of the P/SM job advertisements in Austria and the Netherlands a senior purchaser is demanded. The fact that in less than 9 percent of the job ads a junior purchaser is demanded, does not contribute to the statement of PERFECT project that employers *en masse* are hiring marketing, finance or other business (under) graduates to train them from scratch to mature purchasers. Employers prefer an experienced senior purchaser, i.e. a professional with explicit skills and on top of that a range of soft skills of tacit knowledge. The job ads in this study are aimed on seniors with an education on college level: in only 6 percent of the cases employers explicitly ask for a Master's degree. There is a strong demand for personnel that has earned a degree on college level (*Fachhochschule* in Austria and *Hoger Beroepsonderwijs* in the Netherlands: i.e. Universities of Applied Sciences), although there is a large category in which employers ask for a 'Bachelor's or Master's degree', which means that also undergraduate applicants are invited. In the design of a pan-European P/SM curriculum the members of the PERFECT project must take in account that most employers are satisfied with an undergraduate, even in senior functions. This finding is supported in another international P/SM job ads research. Shou and Wang (2015) found that in about 50 percent a Bachelor's degree is requested[133] and the demand for Master's degree is not stated: *'...keywords with less than a 10% frequency were dropped, since they are uncommon to represent job requirements (...) At last, a total of 75 coded keywords were obtained'.*[134] Probably, a Master's degree was not frequently asked and was not one of those 75, apparently.

[133] Shou and Wang (2015), p. 15.
[134] See: Shou and Wang (2015), p. 5.

The fact that employers are satisfied with undergraduate applicants may indicate that the P/SM function in most firms is immature.[135] This may support the PERFECT assumption that a massive dissemination of a harmonized academic P/SM curriculum is needed in Europe. Nonetheless, as mentioned before, attention for undergraduate programs, especially for Universities of Applied Sciences is recommended.

5.1.2 Culturally explained differences: success orientation in masculine Austria and relation orientation in feminine Netherlands - including the hypotheses testing

This paragraph answers *Research question 2: What are the culturally induced differences in requirements demanded in Dutch and Austrian purchasing job advertisements?*

As mentioned before, in this paragraph also the hypotheses -that are posited in paragraph 2.3- will be tested:

- H1a: Austria as a country with a masculine culture will emphasise more on target orientated job skills.
- H1b: the Dutch feminine culture will lead to more on relationship orientated job skills.
- H2a: the Austrian semi-collectivistic culture will emphasise more on fit-in-group related job skills.
- H2a: the individualistic culture of the Netherlands will emphasise more on self-development skills.

The hypotheses are tested with the results that are displayed in paragraph 4.2.

Masculinity vs. Femininity

The Austrian employers like their future employees to be ‘success-driven’. The significant difference between the proportions can be explained with the theory of Cultural Dimensions of Geert Hofstede. The Austrian culture is considered to be highly 'masculine' and it is not surprising that a masculine feature like ‘success-driven’ scores high in Austria.[136] The same counts for the ability to negotiate. Negotiating seems to be an important part of the purchasers’ job, but the Austrian job ads mention this skill almost twice as much as the

[135] Schiele (2007).
[136] Hofstede (1983a), p. 46.

Dutch. The proportions are therefore significantly unequal. The negotiation techniques are learnable, but it takes -apart from empathic skills- 'masculine' characteristics like 'competitiveness', 'assertiveness' and 'drive for success' to be a successful negotiator.[137]

The Dutch culture is characterised by its Femininity.[138] This is visible in the Dutch online P/SM ads. Dutch employers demand a lot of 'feminine' i.e. sociable features like '*having humour', 'having social manners', 'being diplomatic', 'having the ability to advise', 'being communicative', 'having the capacity to manage personnel', 'having the ability to maintain professional relationships'* including: *'being customer-oriented', 'being open towards change' and 'having the power of persuasion'* (instead of using coercive power).[139]
Having the ability to break down and solve problems means breaking problems down in smaller bits and solving problems is doing 'what works best' and 'being pragmatic'. The Netherlands long-term orientation score is higher and is therefore more pragmatic. This might be one part of the explanation. Problem solving can have impact on either objects or subjects. When people (personnel, colleagues and other stakeholders) are involved, problem solving will have influence on relationships with people. The feminine character of the Dutch culture explains this significant difference.

There is evidence that the 'masculine/feminine' hypotheses are supported:

- Hypothesis 1a is supported: the masculine Austrian culture brings forth job advertisement texts that emphasise more on target orientated job skills.

- Hypothesis 1b is supported: in the feminine Dutch culture the P/SM job ads emphasise more on relationship orientated job skills.

Collectivism vs. Individualism

The Austrian culture is considered to be more 'collectivistic' and hence less 'individualistic' than the Dutch culture. The Netherlands' culture has a very high score on individualism (80)[140] and the Austrian culture is semi-collectivist/semi-individualist, with an 'in between'

[137] Mnookin, Peppet, and Tulumello (1996), p. 218 and Schneider (2012), p 18.
[138] Hofstede (1983a), p. 46.
[139] Hofstede (1983a), p. 45.
[140] The Hofstedian scale ranges from 0 to 100.

score of 55. People in collectivist cultures work to live and people in individualist cultures live to work. In collectivist cultures the concept of 'we' is stronger than 'I'.[141] The significant difference between Austria and the Netherlands on showing commitment is evidence for these unequal proportions.

Employees in Austria are expected to be '*devoted, committed and motivated*' to their employer. Work stress can be associated with the conflicts of interests; for instance between professional and private life. '*Stress occurs to the extent that goals are thwarted. At the same time, while goals induce individual differences these goals are typically not simply idiosyncratic (...) they are embedded in somebody's culture (...) such as cultures emphasising individualism versus collectivism*'.[142] The significant higher scores on flexibility and creativity give support to the Hofstedian finding that the Netherlands has a higher level of individualism.[143]

There is evidence that the 'collectivist/individualist' hypotheses are supported:

- Hypothesis 2a is supported: Austria as semi-collectivist country emphasises more on fit-in-group related job skills.

- Hypothesis 2b is supported: an individualistic country like the Netherlands will emphasise more on self-development skills.

Thus, in the text of online P/SM job advertisements in Austria and the Netherlands the employers reveal the subsequent cultural contexts: the highly masculine and semi-collectivistic Austrian culture and the highly feminine and highly individualistic Dutch culture. The texts in job ads reflect national cultural values.

The findings in the former paragraph 5.1.1 described the similarities: i.e. what skills and what explicit and tacit knowledge a European P/SM professional needs. However, the findings in this paragraph make clear that the European P/SM professional does not exist. The cultural

[141] Hofstede (1983a), p. 46.
[142] Semmer and Meier (2003), p. 91.
[143] Hofstede and Minkov (2010), p 498 Rinne et al. (2013), p. 129; Zha et al. (2006) p. 355; Saad et al. (2015); p. 578 and The_Hofstede_Centre (2016a).

tacit knowledge depends per country or cluster. Employers in different countries ask culture specific, tacit skills.

5.1.3 The differences - Structurally or institutionally explained differences: language proficiency, industry vs. service, Internet penetration, educational systems and purchasing associations

In this paragraph is focussed on research question 3: *what are the institutionally induced differences in requirements demanded Dutch and Austrian purchasing job advertisements?* Differences are found in language proficiency and computer literacy. The Austrian economy is more technically focused and the Dutch is more business/trade oriented. The role of the Dutch purchasing association is different from the Austrian.

English language proficiency

In both countries employers want their applicants to be able to speak proper English. Almost all Austrian and just half of the Dutch employers ask for English proficiency. Between both countries there is a difference in EF English Proficiency Rate. The Netherlands is ranked number 2 of the world ('very high'); just after Sweden and Austria is ranked number 10 ('high').

> *'The German-speaking countries have far higher English proficiency levels in the 18-20 age cohort than in other age groups. The English skills of recent graduates in Austria, Germany, and Switzerland indicate that English instruction in these countries has recently become more effective. Although average adult proficiency scores in these countries have improved only slightly, strength in the youngest adults is a positive indicator for the future'.*[144]

French language literacy

Austrian export to France is 4,6 percent of the total Austrian export in 2012[145] and 8 percent of the total Dutch export is exported to France.[146] This might explain the reason why 5 percent of the Dutch employers against zero percent of the Austrian employers demand French language proficiency.

[144] See: EF_EPI (2015), p. 12.
[145] Europa-auf-einen-blick (2016).
[146] CBS (2016).

German and Dutch language proficiency

German is the official language of Austria and Dutch is the official language of the Netherlands. One third of the Dutch employers ask for German language proficiency. Austrian purchasers do not need to speak Dutch for obvious reason. Dutch employers ask in 43 percent of the cases for Dutch language proficiency whereas the Austrians do not mention German language proficiency in their ads.

The explanation why Dutch P/SM professional need to speak German is clear: Germany is the Netherlands trade partner number 1. About 23 percent of the Dutch export value is exported to Germany in 2015.[147]

Dutch employers demand Dutch language proficiency

The fact that Dutch employers request native language proficiency and the Austrian do not is striking. An explanation could be that the Austrian demography differs from the Dutch. 91,1 percent of the Austrians and 78,6 percent Dutch is autochthonous, but that difference of 12,5 percent points cannot be the (total) explanation of the fact that 43 percent of the employers ask for Dutch proficiency. Moreover, the 5,1 percent of the Dutch population has an origin from a former (Dutch speaking) colony and is counted as allochthonous.[148]

Deviating reading skills in both countries

The Educational Council (*Onderwijsraad*) of the Netherlands reported in 2006 that there are signs that there is a decline in knowledge level of Dutch language proficiency (and mathematics disciplines). This involves basic skills such as vocabulary, grammar and sentence structure and more complex skills such as distinguishing between major and minor issues, structuring and reasoning.[149] The OECD reports that the mean score of student performance in reading (and math and science) is lower in Austria than in the Netherlands.[150] Both countries spend 5,9 percent of GDP on education.[151]

[147] CBS (2016).
[148] (CIA, 2016a) and (CIA, 2016b).
[149] BMÖ (2016).
[150] OECD (2016a).
[151] CIA (2016a) and CIA (2016b).

According to the German Institute in the Netherlands[152] the proficiency of the German language amongst Dutch pupils and student is dropping dramatically. They fear that schools in the nearby future are not obliged to offer courses in the school subject German Language and Literature. On the other hand the Dutch employers who have vacancies for P/SM professionals ask in one third of the cases for German language proficiency.

The above-mentioned Austrian decline in the reading skills is measured between 2006 and 2011. The Austrian Ministry for Education reports that the decline in reading proficiency of children is observable equally from the lower level to the higher levels.[153] On the PIRLS[154] index Austria lost 9 points to a level of 529. The Netherlands lost 1 point and fell back to 546. To compare: in 2011 Germany had 541, Great Britain 552, Belgium 506, Italy 541 and Russia 568.

The fact why Dutch employers ask for native language proficiency and Austrians do not cannot be explained by reading skills according to international comparisons.

Being technical educated or having a business background

According to the World Bank and CIA figures the value that is added by the Austrian industry is 28,0 percent of GDP and in the Netherlands 18,8 percent and the value that is added by the Austrian service sector is 70,7 percent of GDP and in the Netherlands 79,6 percent.[155] The Austrian GDP per capita is $ 47.300 and $ 49.200 per capita in the Netherlands. The added value by the industry per capita is substantially higher in Austria and the added value by the service sector per capita is considerably higher in the Netherlands. This explains the higher Austrian demand for technically trained personnel on all levels: vocational (secondary) schools and universities (of applied sciences) and it is an explanation for the higher demand for personnel that is educated in business administration and business economics.[156]

Computer literacy

Striking is that '*Computer literacy – MS Office*' and therefore also '*Computer literacy – total*' is significantly more demanded in Austria. This does not count for the '*Computer literacy*

[152] Duitsland_Instituut (2016).
[153] Suchań, Wallner-Paschon, Bergmüller, and Schreiner (2012), p. 17.
[154] PIRLS - Progress in International Reading Literacy Study
[155] CIA (2016a); CIA (2016b); and The_World_Bank (2016).
[156] CIA (2016a); CIA (2016b); OECD (2016b) and The_World_Bank (2016).

towards ERP', however, there is only a significant difference when the Alpha is set on 0,01. With the Alpha set on 0,05 percent the difference is insignificant.

The Internet penetration in Austria in 2016 is 81,1 percent. This means that 81,1 percent of the Austrian individuals, of any age *'can access the Internet at home, via any device type and connection'.* Austria is on rank number 35 world wide, behind countries like Slovakia, Puerto Rico and Estonia. The Netherlands is placed on the 9th position (93,7 percent).[157] Back in 2005 the Internet penetration in the Netherlands was 81,0 percent; the same as Austria in 2016.[158] This means that there is a gap of 11 years in Internet penetration: Austria is significantly (p = 0,0028) behind on the Netherlands. Internet penetration might be a side effect of lower computer literacy, which would explain the higher demand for computer literacy in Austrian job ads. However, the OECD reports that 99,5 percent of the Austrian pupils of 15 years old have access to a computer at home in 2012 like a same kind of number (99,8 percent) of the Dutch 15 y/o pupils.[159] The lack of Internet penetration seems not to be the case for the adolescents. It is striking that computer literacy in purchasing specific systems (ERP, SAP etc) are common ground (if Alpha is set on 0,1).

Courses of the Dutch purchasing association NEVI

NEVI is the Dutch Association for Purchasing Management that offers a number of professional courses. The requirement of having passed a NEVI course is therefore Dutch. The most important courses are NEVI1 and NEVI2. NEVI1 is a basic course for a career in procurement (basic knowledge and skills of a procurement professional) and NEVI2 is meant for buyer in the (semi) public sector. Key themes in this training are legitimacy and effectiveness.[160] The Austrian purchasers association BMÖ does not have a trainings institute like NEVI has in the Netherlands.[161]

[157] Internet_Live_Stats (2016)
[158] CIA (2016b).
[159] CIA (2016b).
[160] BMÖ (2016).
[161] Competenzia (2016).

5.2 Reflecting on the reversed use of KODE®X and the content of P/SM job ads

KODE®X: *'weighed, and found wantin'*

The reversed use of the KODE®X model made it possible to categorise similar skills with different titles and indications. However, this model is not to be recommended for reversed use in the P/SM field. The further and future use of KODE®X would not be sufficient, because it is unable to list P/SM specific requirements in detail. Also the job ads that were analysed were found to be not too specific and detailed towards P/SM skills, so that this research could be completed with the use of KODE®X.

Job ads are a good source

Researching secondary data like job advertisements is agreed upon in literature as being an important source for highly up-to-date and practical available data in order to better understand what employers do require from employees. A substantial sample of P/SM job advertisements can provide an effective dataset to analyse desired P/SM competencies.[162]

Employers seem to cover P/SM specific skills with requesting experience in the P/SM field. The conclusion for this study is that P/SM employers ask mostly for tacit knowledge: having experience with *'project management'* and *'process management'*, being *'effective'*, *'proactive'* and *'decisive'*, having *'team spirit'* and *'overview'* and a purchaser has to be a *'holistic thinker'*. Additionally a purchaser must be *'responsible'* and *'trustworthy'*. In some cases employers even churn themselves in vague terms like '*you have got passion for purchasing', 'we are looking for a pleasant personality with a sense of humour'* and *'you have the ability to avoid pitfalls'*. On the other hand the listing of explicit knowledge is very brief and concise: a purchaser needs to have *'Bachelor's or Master's degree'* and has to have *'knowledge of computer programs like ERP, SAP and Exact'*. These are the only two more or less explicit skills that are mentioned.

[162] Mathews and Redman (2001), p. 549; Shou and Wang (2015) p. 2 and Arcodia and Barker (2003), p. 5 and Rafaeli and Oliver (1998), p. 347.

Further reflections: a purchaser needs contemplative skills

The texts of the P/SM job advertisements are emphasising strongly on soft skills or tacit knowledge: 'know-how', whereas a design for a pan-European P/SM curriculum probably will contain mostly explicit, measurable 'know-what' and inevitably also for a smaller part tacit knowledge or soft skills (for instance learning objectives on team work). There is strong evidence that cultural differences play an important role. As mentioned before: the qualifications of successful purchasers are deviating per culture. Therefore the European purchaser does not exist. The consequence for the design of a pan-European P/SM curriculum is to concentrate on common grounds, i.e. setting up-to-date P/SM learning objectives, getting students acquainted with ERP-systems, project and process management and with working in teams. Students need to be (made) aware of ethical principals and last but not least: students are preferable taught to step back and to think-out-of-the-box in a multidisciplinary way. Jehan (2012) supports the conclusion that a purchaser has to have '*the ability to understand the problems and solutions in a coherent dynamic way, including stepping back, thinking and proposing new solutions'*.[163]

This thesis started with a quote of the popular business author Malcolm Gladwell: *'The key to good decision-making is not knowledge. It is understanding. We are swimming in the former. We are desperately lacking in the latter.'*[164] This quote articulates the employers' cry for experienced purchasers and possibly explains the large amount of tacit knowledge that is requested in the job advertisements.

[163] See: Jehan (2012), p. 338.
[164] See: Gladwell (2007), p. 49.

5.3 Limitations of the research

As mentioned in the relevant section the limitations of this non-longitudinal method are the time span where the online P/SM job advertisements were found: in Fall 2015 in Austria and in Spring 2016 in the Netherlands by two different researchers. However, the method in finding the job ads was done carefully and in a similar way.

The scientific literature is confident that job ads provide a profound insight in the needs of employers. However, the online P/SM job ads that were found in Austria and the Netherlands are not precise and detailed on P/SM related skills. Nonetheless, this analysis of skills mentioned in job ads may be a good preparation for the collection of primary data by means of surveys or interviews.[165]

This research is covering only online P/SM job ads in Austria and the Netherlands on one moment on the timeline. The choice for Austria and the Netherlands was a choice induced by the countries of origin of the researchers. Nevertheless, this choice is advocated by Kale (1995, p. 40) who used for his study Hofstede's original four dimensions of culture and found three clusters. Austrian culture is grouped up in a cluster with the German, Swiss, Italian, Britain, and Irish culture, that is characterized '*by medium-high individualism, medium uncertainty avoidance, small power distance, and a high level of masculinity*'[166], whereas the Netherlands has a match with the Scandinavian cultural values in Denmark, Sweden, Finland, and Norway. '*This cluster depicts high individualism, weak to mild uncertainty avoidance, small power distance and low masculinity*'.[167]

The third cluster (Belgium, France, Greece, Portugal, Spain, and Turkey) '*varies on the individualism dimension (...) include medium power distance, strong uncertainty avoidance, and low to medium masculinity*'.[168] Cagliano, Caniato, Golini, Longoni, and Micelotta (2011, p. 307) also performed a cluster analysis with the Hofstedian culture dimensions, but with another set of countries. Austria was excluded, however the Netherlands was clustered up with Estonia, Denmark, Norway and Sweden in their study and supports Kale (1995, p. 40).

[165] For instance for PERFECT – Output 2.
[166] See: Kale (1995), p. 40.
[167] See: Kale (1995), p. 40.
[168] See: Kale (1995), p. 40.

Austria's cluster-fellow Germany is found in the Anglo-Saxon cluster with Ireland, the UK, Australia, New Zealand, and the US. Also this cluster seems to be in accordance with Kale (1995, p. 40).

The differences between cultures in two deviating culture clusters have been shown to be significant and in accordance with the findings of Hofstede (1983b). This means that there is no need and no added value to test online P/SM job advertisements in the 'Mediterranean' cluster too proof that the cultural dimensions would be the explanation of significant differences in job ad texts. The cultural features of countries in the 'Mediterranean' cluster are certainly expressed in the job ad text in those countries.

5.4 Recommendations for future research

Develop a P/SM curriculum

In a design of an international, pan-European P/SM curriculum the concerned must take in account that most employers are satisfied with an undergraduate, even in senior functions. This finding is supported in another international P/SM job ads research. Shou and Wang (2015) in about 50 percent a Bachelor's degree is requested and the demand for Master's degree is not stated: *'...keywords with less than a 10% frequency were dropped, since they are uncommon to represent job requirements (...) At last, a total of 75 coded keywords were obtained'*. Probably, a Master's degree was not a frequently asked and was not one of those 75, apparently. Employers prefer an experienced senior purchaser, i.e. a professional with explicit skills as a firm basis and on top of it a range of soft skills of tacit knowledge. The job ads in this study are aimed on seniors with an education on college level, however it is questionable if future, strategic purchasers are sufficiently equipped when graduated from a University of Applied Sciences. This issue is to be examined in further research.

Where do purchasers come from?

Employers have a very strong preference for senior purchasers. It is understandable that executives were promoted from the senior job, but it is enigmatic where the demanded experienced seniors would have been educated and trained. There is evidence that there is neither a harmonised higher education P/SM curriculum nor a clue in the datasets that employers train juniors on the job. Nevertheless, in the Netherlands the Dutch purchasing

association NEVI offers with the courses NEVI1 and NEVI2 the basic knowledge of the purchasing or even the procurement profession. The purchasing curricula in academia are scarce and employers do not ask for P/SM graduates. Instead, they ask for undergraduates, i.e. seniors with a University of Applied Sciences-degree (or thinking level) with experience in the field. Apparently, there are personnel available with these specifications. This probably means that operations, logistics and other personnel end up in P/SM jobs. Further research on this subject is necessary.

Why is there such a strong emphasis on soft skills?

Soft skills and tacit knowledge are undoubtedly of importance, but the examined job ads seem to exposit an excess of this category. A recommendation for managers who are recruiting P/SM personnel and scholars in the field of HRM would be to find out if job advertisements can be written more detailed towards the required skills instead of asking the obvious questions on cultural specific issues. This implies that the concerned should be aware of this research and can determine the cultural dimensions that are applicable in the own country. For instance: Austrian employers may consider not asking for the obvious *'result-driven'* soft skills, but instead describing the required explicit P/SM know-what hard skills more in detail.

Develop a P/SM skills model

After researching secondary data, the next phase in the PERFECT project will be an analysis of primary data that will be collected directly from companies through interviews and surveys. The KODE®X model will fall short in such an elaborate research. Efforts are made to extend or replace the KODE®X model with features of the purchasing maturity model of Schiele (2007) towards a P/SM skills model. The evidence in this research supports this effort.

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Appendix 1: PERFECT project sheet

Project Sheet

PERFECT

Purchasing Education & Research for European Competence Transfer

CHALLENGE IN PURCHASING & SUPPLY MANAGEMENT (PSM)

More than half of the total turnover of a modern industrial firm in Europe is directly transferred to suppliers. The Purchasing & Supply Management (PSM) function of a firm manages these suppliers. Moreover, the bulk of supplies now is no longer of domestic origin, but European and international. As this network economy with a low depth of production and high reliance on international suppliers is a recent phenomenon that has emerged in the last two decades, firms are still struggling to find effective and efficient ways to cope with it. At the same time, professionalism of Human Resources Management in PSM as well as purchasing staff competences have been put forward as important performance drivers.

NEED FOR STANDARDIZED PSM CURRICULUM

Despite this importance, unlike other disciplines such as marketing or finance, PSM does not have any standardized higher education curriculum. This issue is seen at national, European and regional/international (e.g. North America) levels.
This makes it necessary for companies to hire university graduates with other specializations and often spend years bringing them up to a skill level that graduates in other disciplines already possess. For students, a significant challenge lies in finding appropriate university courses and matching them to their course portfolio during international exchanges. For the higher education institutions involved, the varying course contents and depth in exchange programs hinder a stringent teaching of basic modules first, and then building on them further for PSM.

To seize this opportunity, the overall objective of project PERFECT (Purchasing Education and Research for European Competence Transfer) is to develop an empirically validated European best practice curriculum for both a bachelor's and a master's program in Purchasing and Supply Management (PSM) and in the next step to establish an international studying program at participating universities for higher education in PSM.

Project Partners

technische universität dortmund

UNIVERSITY OF TWENTE.

HOCHSCHULE MAINZ
UNIVERSITY OF APPLIED SCIENCES

STAFFORDSHIRE UNIVERSITY

Lappeenranta University of Technology

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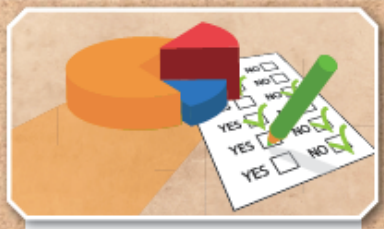
PERFECT

Purchasing Education & Research for European Competence Transfer

THE PERFECT PROJECT INCLUDES THE FOLLOWING MILESTONES:

Firstly, based on a conceptual skill model the project will conduct a benchmarking study analysing best practice examples from universities, corporations and associations' educational programs.



Secondly, the insights gained will be validated by a survey with European firms in order to identify those skills and competencies distinguishing successful companies and effective and efficient PSM.

Thirdly, based on this first ever comprehensive competence assessment, project PERFECT is going to design a European purchasing curriculum.

Finally, in order to promote fast and broad dissemination, PERFECT is going to develop a self-assessment tool for PSM skill evaluation and prepare a Massive Open Online Course (MOOC) for basic PSM skills, which can be used by students and organisations to gauge the levels of their PSM skills.

THE BENEFIT

The Benefit of a pan-European curriculum for PSM education that is based on a combination of identified best practices and industry requirements will ensure that indivdual students are provided with the necessary knowledge and learning to join a purchasing department of any size of organisation in any industrial setting ready to engage in different aspects of purchasing. It provides opportunities for students to gain experience in other European countries e.g. through student exchange programs which will help them to further develop their professional as well as their personal skills.

For the participating academic organisations, this provides an opportunity to strengthen their pan-European ties and ensure that their purchasing curricula reflect the requirements of an increasingly pan-European industry. Pan-European organisations often adopt collaborative buying activities and an understanding of the European dimension of these activities will ensure that their staff is prepared. SMEs, which may not have a pan-European presence, but will nonetheless buy from suppliers in many different countries and will therefore also benefit from this knowledge.
Additional target groups include purchasing related associations. Reaching them is facilitated by the participants' memberships in various relevant associations such as IPSERA (International Purchasing and Supply Education and Research Association) and IFPSM (International Federation of Purchasing and Supply Management).

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Appendix 2 - KODE®X scores per skills-sub-group

- **P** - *'Personal Competences'*. In fifty percent of the cases '*ethics & integrity'* and for the other fifty percent: *'sustainability & responsibility'*. (2% of total).
- **PA** - *'Personal with a focus on Activity and Action Competences'*. The job adverts in Austria have a large focus on *'devotedness',* whereas the learning goals of PSM associations emphasize on the skill '*change driven'*. (3% of total).
- **PS** - *'Personal with a focus on Socio-communicative Competences'* Honesty, Trustworthiness and openness count for fifty percent of the skills in the category PS mentioned in Dutch job adverts and diplomacy is mentioned in another quarter of the cases in this category. (1% of total).
- **PM** - *'Personal with a focus on Methods and Professional Competences'*. One third of the mentioned skills in this category are *'Holistic Thinking'* or '*Having Overview'*. The *'Willingness to Learn'* and *'Continuous learning'* are mentioned in a quarter of the cases in this category. (2% of total).
- **AP** - *'Activity and Action with a focus on Personal Competences'*. '*Innovation Propensity', 'Creative Will'* and the *'Capacity to make decisions'* are each mentioned in twenty-five percent of the cases in this category. (3% of total).
- **AS** - *'Activity and Action with a focus on Socio-communicative Competences'*. Seventy five percent of the cases in this category mention '*Capacity for Enthusiasm', 'Quick-wittedness', 'Flexible Thinking'* and *'To give impulse' as skills.* (3% of total).
- **A** - *'Activity and Action Competence'* and includes competences like *''mobility' (sixty percent)* and *'proactive' (twenty percent)*. The Austrian job adverts score higher in this category. *'Mobility'* is mentioned five out of nine times and counts therefore for more than half in the source groups Austrian job ads. The non-weighted average would be 4,2 percent and that seems to be a more appropriate, realistic and expected. Being 'proactive' is the most eye-catching competence in this subgroup. (6% of total).
- **AM** - *'Activity and Action with a focus on Methods and Professional Competences'. Persistence, Result-orientated action-taking, Consequence, Goal-oriented Management, Goal-orientation* and *Target agreement* are absent in the learning goals of academia, but are important for the job adverts in Austria as well as in the Netherlands. Employers like to hire highly effective academic PSM personnel, whereas the universities do not provide graduates with such skills. (5% of total).

- **SP** - *'Socio-communicative with a focus on Personal Competences'*. Examples in this category are *Ability to be on a team, Team Spirit, Team-oriented, Open in Communication, Interpersonal Skills, Ability to Resolve Conflicts* and so on. The literature sees the importance of these skills, directly followed by the job adverts in the Netherlands. The total average of eight percent seems to be representative for the importance of being 'team-oriented'. It is remarkable that Austrian employers mention the 'team spirit'-skill lesser. (7% of total).
- **SA** - *'Socio-communicative with a focus on Activity and Action Competences'*. Here the most mentioned skills are the '*Capacity to Manage Personnel'* and the *'Ability to Solve Problems'*. The literature is not mentioning these skills, which are found important in the Dutch job ads. Surprisingly, the job adverts in Austria differ a lot from the Dutch. (5% of total).
- **SM** - *'Socio-communicative with a focus on Methods and Professional Competences'*. *'Language Proficiency'* is in ninety five percent of the cases mentioned, especially in the literature and in the Dutch job ads. (11% of total).
- **S** - '*Socio-communicative Competences'*. Examples of important skills in this category are Ability to Communicate and to Conform, Relation Management and Capacity to Cooperate. The literature does not mention these skills, whereas the both learning goals and the Dutch job adverts see the importance of these skills. (5% of total).
- **MS** - '*Methods and Professional with a focus on Socio-communicative Competences'*. Being 'down-to-earth', having talent for presentations and project management are most often mentioned in this category. (1% of total).
- **MP** - *'Methods and Professional with a focus on Personal Competences'*. Eye-catching is *'Analytical Talent/Ability'*. (2% of total).
- **MA** - '*Methods and Professional with a focus on Activity and Action Competences'*. *'Proceeding in a systematic-methodical manner', 'having Technical knowledge'* and *'Conceptual Strength'* are examples of skills, which are mostly found in the literature and the academic learning goals. In this category MA the skill *'Proceeding in a systematic-methodical manner'* is mentioned in seventy percent of the cases in the scientific PSM literature, whereas the skill *'Conceptual Strength'* is mentioned in eighty percent of the cases in the academic learning goals. (4% of total).
- **M** - *'Methods and Professional Competence'* and it contains out of the sixteen KODE®X subgroups of the longest list of skills. *'Market Knowledge', 'Marketable Knowledge', 'Marketing Knowledge', 'Performance Know-How', 'Procurement Knowledge',*

'Multidisciplinary', 'Specialized Knowledge', 'Know-How Orientated', 'Comprehension of Complexity', 'Knowledge about Production', 'Knowledge of Processes', 'Product Knowledge', 'Expert Knowledge', 'Analytical Expertise' are skills that count for about fifty percent in the competence set of a PSM professional. The literature and the Dutch job adverts mention these skills in one third of the cases. (40% of total).

Appendix 3 – Skills mentioned in scientific purchasing skills literature

Literature	Cavinato	Keough	Kolchin and Giunipero	Baily et al.	Down and Liedtka	Killen and Kamauff	Murphy	Carter and Narasimhan	Cruz and Murphy	Pagell et al.	Anderson and Katz	McKeefry	Giunipero	Carr and Smeltzer	Giunipero and Pearcy	Faes et al.	Muller	Burt and Dobler	Cousins and Spekman	Trent and Monczka	Giunipero and Handfield	Giunipero et al.	Mulder et al.	Giunipero et al.	Tassabehji et al.	Eltantawy et al.	Kern et al.	Knight et al.	Zawawi et al.	
	1987	1993	1993	1994	1994	1995	1995	1996	1996	1996	1998	1998	1999	2000	2000	2001	2001	2003	2003	2003	2004	2005	2005	2006	2008	2009	2011	2014	2014	Total
Negotiation		x	x	x		x	x		x				x		x				x		x	x	x		x	x		x	x	16
Problem-solving			x	x	x					x	x		x	x	x		x				x	x			x	x		x		14
Leadership			x	x	x	x				x			x		x	x					x	x		x		x		x		13
Analytical			x		x							x	x		x		x				x	x				x				9
Influencing		x	x										x		x						x	x		x	x			x		9
Strategic thinking								x	x				x		x			x			x	x				x		x		9
Technical	x						x					x	x		x		x				x	x				x				9
Blueprint reading													x	x	x						x	x			x			x	x	8
Supply chain management						x		x	x		x						x	x							x	x				8
Conflict resolution			x							x			x		x						x	x						x		7
Cost analysis		x		x						x	x			x											x			x		7
Decision-making				x								x									x			x	x	x		x		7
Product knowledge	x			x		x				x		x													x			x		7
Project management							x				x			x							x				x	x		x		7
Ability to work on a team													x	x	x						x	x						x		6
Computer literacy			x							x			x		x							x						x		6
Computers	x				x			x									x	x								x				6
Creativity			x										x		x	x					x	x								6
Customer focus			x										x		x							x				x		x		6
Interpersonal communication			x										x		x				x		x	x								6
Managing internal customers													x		x						x	x			x			x		6
Supplier evaluation							x				x						x								x	x		x		6
Time management			x										x		x						x	x			x					6
Ability to make decisions			x										x		x						x	x								5
Communication					x	x		x									x									x				5
Forecasting				x										x									x		x			x		5
Listening				x		x															x			x	x					5
Managing change			x										x		x						x	x								5
Organization													x		x							x			x	x				5
Persuasion			x							x			x								x							x		5
Specification development													x		x						x	x						x		5
Strategic supplier selection					x		x										x	x								x				5
Tactfulness in dealing with others			x										x		x						x	x								5
Understanding business conditions													x		x						x	x						x		5
Analytical skills		x								x				x														x		4
Materials mgt. inv.JIT	x							x				x														x				4
Research				x			x																		x	x				4
Risk management												x													x	x		x		4
Structuring supplier relationships													x		x						x	x								4
Supplier cost targeting													x		x							x						x		4
Supplier relations	x								x								x								x					4
Supply base research													x		x							x						x		4
Written communication													x		x						x	x								4
Change Management																									x	x		x		3
Computational															x						x	x								3
Computer skills							x					x		x																3
Conflict management						x																			x	x				3
Creative thinking				x																					x	x				3
Inquisitiveness													x		x							x								3
International buying								x																	x	x				3
Interpersonal					x			x																		x				3
Mathematical skills														x											x			x		3
Planning			x	x																	x									3
Professional presence/bus perspective					x							x														x				3
Quality	x							x				x																		3
Quality management														x												x		x		3
Salesmanship															x						x	x								3
Team building facilitation								x										x								x				3
Technology planning													x		x							x								3
Analytical skills Investigation																			x						x					2
Communication skills														x														x		2
Coordinating skills														x														x		2
Educational background					x				x																					2
Financial management																					x		x							2
Global sourcing development										x															x					2
Integral thinking						x																	x							2
Integrity						x										x														2
Knowledge/supply management Items	x																	x												2
Negotiating										x	x																			2
Organizational skills — paperwork			x											x																2
Presentation skills														x							x									2
Production systems	x																									x				2

Literature	Cavinato	Keough	Kolchin and Giunipero	Baily et al.	Down and Liedtka	Killen and Kamauff	Murphy	Carter and Narasimhan	Cruz and Murphy	Pagell et al.	Anderson and Katz	McKeefry	Giunipero	Carr and Smeltzer	Giunipero and Pearcy	Faes et al.	Muller	Burt and Dobler	Cousins and Spekman	Trent and Monczka	Giunipero and Handfield	Giunipero et al.	Mulder et al.	Giunipero et al.	Tassabehji et al.	Eltantawy et al.	Kern et al.	Knight et al.	Zawawi et al.	
	1987	1993	1993	1994	1994	1995	1995	1996	1996	1996	1998	1998	1999	2000	2000	2001	2001	2003	2003	2003	2004	2005	2005	2006	2008	2009	2011	2014	2014	Total
Risk taking										x												x								2
Risk taking/entrepreneurial													x		x															2
Sales interface																									x	x				2
Supplier relationship management																									x			x		2
Team-based working						x													x											2
Technical writing																									x			x		2
Total cost analysis	x																									x				2
A total systems cost mindset		x																												1
Ability to be flexible														x																1
Ability to develop global contracts																				x										1
Ability to follow up														x																1
Ability to handle multiple tasks simultaneously														x																1
Ability to listen																x														1
Ability to negotiate																				x										1
Ability to think holistically beyond a site or region																				x										1
Accounting skills																					x									1
Adaptability																x														1
Advising (The purchaser is able to effectively communicate relevant advice on purchasing.)																							x							1
An understanding of strategy development																				x										1
Analysis and strategic sourcing																									x					1
Analytical abilities																							x							1
Assessing ethical situations																					x									1
Be able to get to the root cause of a situation														x																1
Be patient														x																1
Be proactive														x																1
Being organized																					x									1
Belief in product and company																x														1
Broad business perspective											x																			1
Broad-based business skills																					x									1
Business analysis skills																													x	1
Business case analysis											x																			1
Business management knowldege						x																								1
Business skills																									x					1
Buyer–supplier relationship management																											x			1
Calculation				x																										1
Category management																									x					1
Challenging materials specifications		x																												1
Close linkage with marketing and sales functions											x																			1
Collecting information about purchases in a common format		x																												1
Commercial awareness																			x											1
Commercial education																x														1
Common sense																					x									1
Communicate and sell message/strategy internally																									x					1
Communicates well						x																								1
Company business knowledge				x																										1
Competitive bidding		x																												1
Compromises						x																								1
Compromising																								x						1
Computer compatible				x																										1
Computer literacy in using popular application software packages																					x									1
Computing skills																									x					1
Computional													x																	1
Conceptual thinking				x																										1
Contract Design skills																													x	1
Contract management																					x									1
Contract management skills																													x	1
Contract writing																					x									1
Contracting											x																			1
Cost accounting and making the business case																								x						1
Cost analytic skills																				x										1
Cost driver																									x					1
Cost driver analysis																									x					1
Creative contract writing											x																			1
Cross-cultural awareness																									x					1
Cross-functional integration																											x			1
Cross-functional teams																					x									1
Cross-functional teamwork		x																												1
Cultural awareness																									x					1

Literature	Cavinato	Keough	Kolchin and Giunipero	Baily et al.	Down and Liedtka	Killen and Kamauff	Murphy	Carter and Narasimhan	Cruz and Murphy	Pagell et al.	Anderson and Katz	McKeefry	Giunipero	Carr and Smeltzer	Giunipero and Pearcy	Faes et al.	Muller	Burt and Dobler	Cousins and Spekman	Trent and Monczka	Giunipero and Handfield	Giunipero et al.	Mulder et al.	Giunipero et al.	Tassabehji et al.	Eltantawy et al.	Kern et al.	Knight et al.	Zawawi et al.	Total
	1987	1993	1993	1994	1994	1995	1995	1996	1996	1996	1998	1998	1999	2000	2000	2001	2001	2003	2003	2003	2004	2005	2005	2006	2008	2009	2011	2014	2014	
Customer focus (on final customers)																					x									1
Customer orientation (The purchaser is able to determine the needs of the internal customer and is able to cater to or to anticipate on these needs.)																							x							1
Data analysis				x																										1
Decisonmaker						x																								1
Delegationg				x																										1
Demand forecasting skills																													x	1
Demonstrate ability to add value throughout the organisation																									x					1
Design liaison				x																										1
Design/Technical Skills																													x	1
Detail-oriented														x																1
Disassembling the components		x																												1
Drafting skills (CAD)														x																1
Economic literacy																					x									1
Effective communication																				x										1
Effectively managing change										x																				1
Effectively managing internal and external relationships										x																				1
Ego-drive																x														1
Eloquence																x														1
Empathy																x														1
End market business knowlege				x																										1
Entrepreneurial behavior																					x									1
Environmental awareness																x														1
Environmental/sustainability skills																													x	1
E-procurement																									x					1
Ethics																					x									1
E-tools																											x			1
Evaluating				x																										1
Execution																								x						1
Extraversion																x														1
Facilitation and team building											x																			1
Finance												x																		1
Financial analysis				x																										1
Financial engineering skills																													x	1
Functional credibility		x																												1
General business skills		x																												1
Generalising (The purchaser is able to draw a conclusion at a general level from some specific actions or decisions.)																							x							1
Goal-setting																								x						1
Good appearance																x														1
Good report and letter writer						x																								1
Government regulations										x																				1
Group dynamics										x																				1
Honesty																x														1
Human capital skills																													x	1
Human relationship				x																										1
Identifying and solving problems						x																								1
Incentive system																											x			1
Influence										x																				1
Information management																							x							1
Initiator																x														1
Innovation management																					x									1
Inquisitive nature																					x									1
Interest in different cultures																x														1
Internal motivation																									x					1
Internatinal cultural awareness										x																				1
Interviewing				x																										1
Investigative nature			x																											1
Is able to analyze various strategic options and their direct potential and indirect impact on the organization						x																								1
Is knowlegeable about the organization´s business						x																								1
Knowledge management																											x			1
Knowledge/supply management Items																										x				1
Legal-solving abilities																							x							1
Legislation																									x					1
Life-cycle costing skills																													x	1
Likes to research						x																								1
Logical thinking				x																										1

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	1987	1993	1993	1994	1994	1995	1995	1996	1996	1996	1998	1998	1999	2000	2000	2001	2001	2003	2003	2003	2004	2005	2005	2006	2008	2009	2011	2014	2014	Total
Man management				x																										1
Manage external advisers																													x	1
Manage strategic alliances/partnerships							x																		x					1
Management			x																											1
Managing internal relations																					x									1
Managing others																					x									1
Managing risk																											x			1
Managing strategic partnerships																					x									1
Managing the supply base										x																				1
Market analysis						x																								1
Market knowlege				x																										1
Meeting management																														1
Modelling				x																										1
Monitoring compliance with national or		x																												1
Motivating				x																										1
Motivating others																					x									1
Motivational principles																					x									1
Motivator						x																								1
MRP understanding, computer/manual														x																1
Negotiating multi-site agreements		x																												1
Negotiating skills (cost)														x																1
Negotiating skills (issues/problems)														x																1
Networking																							x							1
Oral communication																									x					1
Organisation wide financial skills																									x					1
Organizational												x																		1
Output specification skills																													x	1
Passing on information																									x					1
Pays attention to details						x																								1
People skills (work with suppliers)														x																1
Performance tracking																											x			1
Perseverance																x														1
Personal learning/self development																					x									1
Persuading																									x					1
Persuasive speaker						x																								1
Persuasiveness						x																								1
Planning and organizational skills										x																				1
Preparation				x																										1
Presentation																								x						1
Principles of purchasing						x																								1
Process management											x																			1
Process mapping																					x									1
Production systems and processes																									x					1
Program management														x																1
Project planning																									x					1
Project scoping																								x						1
PSM authority																											x			1
PSM tools																											x			1
Public speaking																								x						1
Purchasing																							x							1
Purposeful						x																								1
Quality requirements						x																								1
Questioning				x																										1
Questioning products and their package designs		x																												1
Quick response capability											x																			1
Regulatory governance skills																													x	1
Relationship building											x																			1
Relationship influencing skills																									x					1
Report writing				x																										1
RFx tools (RFx – request for proposal, information, or quotation)																											x			1
Risk identification and mgt skills																													x	1
Sector knowledge																													x	1
Selection				x																										1
Self confidence																x														1
Self-discipline																x														1
Self-esteem						x																								1
Self-motivation					x																									1
Selling skills													x																	1
Skills management																											x			1
Skills needed to identify and distinguish between strategic and non-strategic activities		x																												1
Sophisticated technical knowlede											x																			1
Sourcing strategy development											x																			1

Literature	Cavinato	Keough	Kolchin and Giunipero	Baily et al.	Down and Liedtka	Killen and Kamauff	Murphy	Carter and Narasimhan	Cruz and Murphy	Pagell et al.	Anderson and Katz	McKeefry	Giunipero	Carr and Smeltzer	Giunipero and Pearcy	Faes et al.	Muller	Burt and Dobler	Cousins and Spekman	Trent and Monczka	Giunipero and Handfield	Giunipero et al.	Mulder et al.	Giunipero et al.	Tassabehji et al.	Eltantawy et al.	Kern et al.	Knight et al.	Zawawi et al.	
	1987	1993	1993	1994	1994	1995	1995	1996	1996	1996	1998	1998	1999	2000	2000	2001	2001	2003	2003	2003	2004	2005	2005	2006	2008	2009	2011	2014	2014	Total
Stakeholder management skills																													x	1
Stakeholder mapping proficiency																									x					1
Strategic management				x																										1
Strategic supplier management																											x			1
Stress management														x											x					1
Supplier negotiation management																											x			1
Supplier performance management																											x			1
Supplier selection				x																										1
Supply base strategy																											x			1
Supply market business knowledge				x																										1
Supply risk management																											**x**			1
Tactical supplier management																											x			1
Takes appropriate risks						x																								1
Takes initiative						x																								1
Talent management																											x			1
Target management																											x			1
Target setting system																											x			1
Team working				x																										1
Team-building																									x					1
Technical business writing														**x**																1
Technical education																x														1
Technical expertise																**x**														1
technical knowledge				**x**																										1
Technical product or service knowledge											**x**																			1
Thinking in the abstract						x																								1
Time management — prioritize														x																1
Tool capacity																									x					1
Total Quality Management																									**x**					1
Total quality managemnt										**x**																				1
Understand continuous inventory review system														x																1
Understand manufacturing processes, terminology														x																1
Understand other departments														x																1
Understanding																									**x**					1
Understanding general business			**x**																											1
Understanding manuf. process																												**x**		1
Understanding manuf. terminology																												**x**		1
Understanding materials (e.g., plastics)														x																1
Understanding tool capability, tool life														x																1
User liaison				x																										1
Using the Internet																					**x**									1
Web-enabled research and sourcing analysis																								x						1
Work in cross-functional team																									x					1
Work planning				**x**																										1
Working effectively with other cultures																				x										1
Working with internal customers/other functions														x																1
Works well with department members, other departments and suppliers						x																								1
Writing																								x						1
Written and oral communication										x																				1

Source: PERFECT (2016), pp. 17-21.