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Humanitarian Logistics Skills and Performance

Abstract

The question of logistics skills is important for management, career development, as well as education. Existing models of logistics skills have, however, not yet been tested, nor has their impact on logistics performance been evaluated. This study fills this gap by testing the T-shaped model of logistics skills in the light of logistics performance. Special attention is paid to the respondent group of humanitarian logisticians. The article concludes that the T-shaped model of logistics skills is applicable in both the general as well as the humanitarian logistics setting. The gendered nature of these skills reveals the significance of some male skills that can create an entry barrier to women in logistics.

Keywords: humanitarian logistics, humanitarian supply chain, logistics skills, logistics performance, gender

1. Introduction

In the aftermath of a disaster, be it natural or man-made, logistics is a cornerstone of the response of the humanitarian community. Indeed, some commentators have suggested that as much as 80% of an NGOs expenditure can be classified under the broad heading of logistics (van Wassenhove, 2006) and, in that sense, a humanitarian organisation is a logistics organisation – albeit one with, typically, a specific mandate and target set of beneficiaries. In parallel, there is evidence that the number and magnitude of the disasters themselves is increasing with a concomitant adverse effect on individuals, communities and countries (EM-DAT, 2008). The result has been an increasing professionalisation of humanitarian logisticians, through an appreciation that training and education can provide tangible improvements to the effectiveness and efficiency of logistics support, and hence, to the recipients of humanitarian aid.

Nevertheless, given that the ultimate aim of humanitarian logistics is to meet the requirements of “end beneficiaries” (Thomas and Mizushima, 2005), it is clear that the effectiveness of humanitarian logistics depends not only on the outcome of the humanitarian logistics response in terms of moving the required goods and services into the affected area, but also on how successfully the needs of different groups of aid recipients have been ascertained (Kovács and Tatham, 2008). Indeed, unlike the standard business model, there is a decoupling of financial and material flows with aid workers often acting as proxies for the beneficiaries who are not in a position to articulate their requirements. As a result, it is suggested that, whilst humanitarian and business logisticians may share many common skills and attributes, it is possible that the emphasis placed on each of these vary as a result of the environment in which they are required to operate.

Prior research has been looking at logistics skills from the perspective of education, i.e. which skills and knowledge areas should be emphasised in training programmes and logistics masters programmes (Mangan *et al.*, 2001) and from a career development perspective, such as Murphy and Poist’s (2007) evaluation of logistics skills needed to advance to senior positions. Other authors have investigated the differences between skills required for logisticians vs. supply chain managers (Gammelgaard and Larson, 2001; Dischinger *et al.*, 2006), though in this case, literature has asserted a number of biases that not only reflect the individual author’s definition of “logistics”, but also that of logisticians themselves, and that of hiring organisations (Sohal and D’Netto, 2004; Trunick, 2007). There is to date, no

agreement on such a definition, nor on a particular distinction between logistics and supply chain management; Larson *et al.* (2007) thus discuss four different perspectives on such a differentiation, ranging from a re-labelling perspective that equals logistics to supply chain management, to intersectional, to different embedded views. Similarly, there is no agreement on the differences between “humanitarian logistics” and the management of “humanitarian supply chains”. Which skills humanitarian logisticians need, thus depends on their job description, and on the view of their particular organisation (i.e. of managers of logisticians) on what logistics entails.

In parallel, there is an equally rich stream of literature that discusses logistics performance which can be broken down into discussions of measures to improve effectiveness and/or efficiency (Beamon, 1999; Morgan, 2004 and 2007). Importantly, however, there would appear to be no literature that links the issues of skills needed by a logistician and their impact on logistics performance. The aim of this article is, therefore, twofold: to analyse the skills needed for humanitarian logistics, and to evaluate their perceived impact on humanitarian logistics performance. For this purpose, an online questionnaire has been sent out to humanitarian logisticians, and their managers. In the following, we will elaborate on the research problem and subsequent model construction, before reflecting on the methods of the survey and reporting its key findings. The article closes with conclusions and pinpoints some avenues for further research.

2. Humanitarian logistics skills and performance

The question of logistics skills is relevant for industry as well as education. In both cases, the skills that are listed are shaped by the definition of logistics in the first place (Sohal and D’Netto, 2004; Trunick, 2007). Logistics professionals may have several possible affiliations to professional organisations, which may focus on particular areas such as warehousing, transportation, or purchasing, take a supply chain and/or an operations view, or be defined by geographical boundaries. Which skills are deemed relevant for logistics, thus depends on who gets their say, in other words, which organisation’s mailing list a questionnaire may have been sent out to (Trunick, 2007). Setting the question of definitions aside, logistics is mainly perceived as an engineering discipline (Sohal and D’Nettok 2004; EP, 2007). Mangan and Christopher’s (2005) T-shaped skills model for logistics is thus one borrowed from engineering (Vereecke *et al.*, 2008; for similar models see e.g. Iansiti, 1993 or Weiss, 2005).

The main idea behind T-shaped people is, however, the combination of rather technical skills with “softer” managerial knowledge areas (see Figure 1) – both of which are arguably needed in logistics.

<take in Figure 1 about here>

Such a combination is also reflected in the call for humanitarian logistics training (Thomas and Mizushima, 2005) as well as job descriptions of humanitarian logisticians (CILT, 2008), which include anything from specific customs handling procedures to “negotiation skills with warlords”. These kinds of specifications in job advertisement give way to the impression that the set of skills required in humanitarian logistics differs from a commercial setting. As in the commercial setting, humanitarian logistics jobs can be set on technical-operational levels to in top management. Yet, an analysis of job advertisements in humanitarian logistics points towards two directions of such differences: (a) the emphasis on basic technical skills including maintenance and operations, and (b) the requirement of a broader spectrum of management knowledge, especially in the management of inter-personal relationships (cf. Larson, 2009). The general requirement of a co-ordination of activities across humanitarian organisations (van Wassenhove, 2006; Oloruntoba and Gray, 2006; Kovács and Spens, 2007) gives way to this latter emphasis on relationship management. In the case of humanitarian organisations, the question is not only one of relationships in the supply chain but with competitors.

As for the T-shaped model of logistics skills, it is important to note that functional logistics skills vs. general management skills are not seen as equally important. Mangan and Christopher (2005) indeed suggest that “supply chain managers” regard themselves as “managers first and logisticians second . . . with requisite skills and competencies sets that comprise both general managerial skills and competencies and specific logistics/supply chain skills and competencies” which, indeed, seems to be a consensus view in the literature. Thus, van Hoek *et al.* (2002) as well as Vereecke *et al.* (2008) take a similar line by suggesting that there is a need for a logistician to possess not only a core volume of logistics knowledge, but also a set of personal skills. What is more, in line with Mason-Jones *et al.*'s (2000) differentiation between “market qualifiers” and “market winners”, logistics skills are seen as only a qualifier, but not a differentiator (van Hoek *et al.*, 2002). Yet, as the sectoral initiative

“Skills for Logistics” argues, logistics skills are relevant for the competitive advantage of the industry (Skills for Logistics, 2009). According to this initiative, there are still relevant gaps both on the basic skills as well as the management levels, which need to be filled through further, more tailored, logistics training and education. But whilst there is an interest in logistics skills also from the perspective of policy-makers, interestingly, the suggested T-shaped model has not (yet) been tested in logistics. What is more, despite arguments for differences between humanitarian and commercial settings, there is little understanding as to which skills are relevant to each.

The focus on education and industry relevance leaves yet another question open, that of the effect of certain skill sets on logistics performance. This is the more surprising, as it is the impact on logistics performance that renders a skill set relevant in the first place. Logistics performance measurement traditionally focuses on the dimensions of efficiency and effectiveness. As Kovács and Tatham (2009) discuss, breaking down these two results in debates on product and process quality, on-time deliveries, flexibility, time and cost efficiencies, and customer service levels. Beamon and Balcik (2008) suggest a tripartite measurement in terms of (a) resource performance metrics (resource utilisation, quantities, output) such as inventory holding costs to man-hours, (b) output performance metrics (i.e. looking at effectiveness) such as lead times, back-orders and stock-outs, product quantities and qualities, all in accordance with the strategy of an organisation, and (c) flexibility metrics such as shortest delivery lead times etc. One of the most interesting dimensions related to humanitarian supply chains is that of effectiveness, as it is far from unclear whether it is the effectiveness of an organisation, a mission, or aid effectiveness en large that should be measured. Insofar, humanitarian logistics literature has focused on organisational (or programme) performance (e.g. de Brito et al., 2007; Schulz and Heigh, 2007), though disaster management en large can be under scrutiny from the perspective of a disaster region as well. Generally, however, literature on humanitarian logistics performance is scant (Kovács and Tatham, 2009). Yet performance measurement in humanitarian supply chains is particularly important from the perspective of accountability to beneficiaries as well as donors. The point remains that logistics skills need to have a (positive) impact on logistics performance as to gain relevance.

Kovács and Tatham (2009) take up another issue of potential relevance to humanitarian logistics performance: that of the gender of the humanitarian logistician. There is an ongoing debate also in business logistics that relates to distinct career patterns of women logisticians,

and the contribution of male vs. female logisticians to the field. Generally, the under-representation of women is criticised in logistics (Lynagh *et al.*, 1999; CSCMP, 2006; Woodward and Winter, 2006; Trunick, 2007; Vereecke *et al.*, 2008). Related to logistics skills, female logisticians are asserted different leadership skills (CSCMP, 2006) and negotiation skills (Min *et al.*, 1995), thus there appear to be some differences in the skill sets of male and female logisticians. In the humanitarian setting, there is ample anecdotal evidence of gender impacting on logistics performance (Kovács and Tatham, 2009) due to a (a) gendered access to aid and a differentiated disaster vulnerability among male and female populations (Bradshaw, 2001; Delica, 2002; Enarson, 2002; Fordham, 2002) as well as (b) the lack of female logisticians leading to e.g. gender-insensitive purchasing (ALNAP, 2005).

In summary, the areas of logistics skills, logistics performance, and gender, are interlinked. Different sets of logistics skills supposedly impact on logistics performance, with gender being a mediator between the two. The following model serves, thus, as a basis of our study (see Figure 2):

<take in Figure 2 about here>

Sets of skills investigated in the model follow the T-shaped model of logistics skills with its differentiation between functional logistics skills and softer management skills (Mangan and Christopher, 2005; Vereecke *et al.*, 2008).

3. Research methods

The study set out to analyse the skills needed for humanitarian logistics, and to evaluate their perceived impact on humanitarian logistics performance. Adhering to the underlying model of logistics skills and performance, skills are only deemed relevant in light of their impact on logistics performance. This is reflected in the questionnaire used for the study, that asks logisticians and their managers to “indicate the importance, in terms of logistics performance, of [sets of] attributes” on a 7-point Likert scale. Thus, skills are not evaluated per se, but only in relation to their perceived impact on logistics performance overall. Skill sets were directly taken from Mangan and Christopher’s (2005) T-shaped model, though refined by other literature on logistics skills (Thomas and Mizushima, 2005; Murphy and Poist, 2007;

Vereecke *et al.*, 2008). Subsequently, a pilot survey was conducted and administered at the 2008 Logistics Research Network (LRN) conference. The aim of this pilot was to understand if the respondents considered the suggested list of skills and attributes was complete, or whether additions were required. 75 researchers answered the pilot survey, and this led to several modifications in the table including adding a number of skills (shown in italics in Table D), and re-labelling others. It will be noted that the changes are mostly be found in the interpersonal skills area, where a further distinction was made between people management and human resource management.

<take in Table I about here>

In the general management section, a further differentiation was made between customer relationship management and supplier relationship management. In the functional logistics section, areas such as reverse logistics and port management were added on. Table I essentially summarises the resulting skill sets that were then used in the main study.

The model also supposes gender to be a mediating factor. Thus the same skill sets are repeatedly asked about, again in light of logistics performance: “In terms of logistics performance, please indicate whether you think each of the following functions is best carried out by males or females, or if gender is not important.”

The study was carried out as an online survey sent out via various channels to populations of logisticians (humanitarian, business, military) and their managers, as well as logistics academics. Mailing lists (such as the Logistics Research Network list, the Humanitarian Logistics Association’s list) as well as snowball sampling were used, as recipients were asked to forward the link to the survey to their colleagues. Response rates can be calculated from the number of site visits (cf. Menachof *et al.*, 2009). The survey site was visited 505 times, and resulted in 174 responses, yielding a response rate of 34.5%. Among these were 20 responses from humanitarian logisticians and further 12 from their managers, as to say, 16.0% of responses came from the humanitarian group of respondents (see Figure 3). Further 2 respondents indicated their relation to “humanitarian aid” in the categorisation of “other”. The further analysis will focus on the humanitarian group in relation to the entire survey population.

<take in Figure 3 about here>

The respondents had significant expertise in the field, with only 11.5% of them having worked under three years with logistics, and over 46.6% having an experience of over 10 years. What is more, respondents came from all around the world. Whilst the largest population (36.8%) was from the UK (due to the LRN mailing list), there were respondents from Australia to Uruguay, the spread being larger when looking at the current deployment of respondents. Considering that part of the questions related to gender, and the low number of women in logistics is often criticised, it was interesting to see that 41.4% of respondents were female. Generally, thus, the respondent population can be attested good and global expertise in logistics as well as a gender balanced insight into questions of gender and logistics skills.

4. Discussion of findings

A first analysis of relevant logistics skills shows that problem solving and interpersonal skills fair more relevant than general management or even functional logistics skills (see Table II). This is rather surprising, as the survey was after all on logistics skills, and Mangan and Christopher (2005) specifically pinpoint the importance of general management skills for logisticians. However, the lower general relevance of functional logistics skills can be explained by van Hoek *et al.*'s (2002) suggestion of these being qualifiers, but not differentiators for a job in logistics. In other words, logisticians need this kind of “textbook knowledge”, yet, in order to advance in their career, cannot rely on these skills alone.

<take in Table II around here>

As for specific skills, only one of them was deemed less relevant (i.e. not significantly relevant), that or “marketing”, albeit it was not significantly irrelevant, either. All other specific skills were deemed relevant, en large confirming Mangan and Christopher's (2005) T-shaped model of logistics skills. The general conclusion is thus, that the T-shaped model of logistics skills is, indeed, applicable to logisticians. More importantly, all the relevant skills in the model contribute positively to logistics performance.

“Supplier relationship management” was of specific relevance in the skill group of general management skills. This can be explained by the management of supplier relations being part of any purchasing process, and thus closely linked to a functional logistics skill. Similarly, “leadership” stood out from the interpersonal skills group, while all problem solving-related skills were particularly emphasised.

A group split between general (G) and humanitarian (H) cohorts of respondents reveals some interesting differences (see the results of an independent *t*-test in Table II). Generally, the group split showed that there are significant differences between the skill sets emphasised in humanitarian logistics, vs. in logistics en large. Firstly, differences consisted in both the general emphasis level of each skill. One possible interpretation is that these skills are indeed more relevant to humanitarian logistics, and impact higher on logistics performance. A rival explanation is, though, that respondents from the humanitarian cohort are more polarised in their evaluations than their counterparts from business or military logistics. Specific differences point in the directions of the humanitarian cohort emphasising problem-solving skills even more. As for specific indicators in other skill groups, there is more emphasis put on negotiation skills, and interestingly, purchasing in the humanitarian sector.

Contrary to expectations, differences were not significant when it came to specific skill such as marketing or customs clearance (i.e. *p*-values were below 0.05). There was also less difference in the importance of stress management as a skill, even though one would expect humanitarian logisticians to work under significant stress. On the other hand, the significant difference in the importance of negotiation skills (with a higher emphasis in the humanitarian cohort) fit well with CILT’s (2008) analysis of humanitarian job descriptions stressing negotiation skills. Other specific differences (see e.g. the evaluation of “transportation management”) turned out not to be significant.

Looking at gender as a mediating factor, the overall question of “Do you think the gender of the logistician affects logistics performance?” was evaluated very low, as to say, with means of 2.36 (general) respectively 3.00 (humanitarian) on the 7-point Likert scale. While the difference between cohorts is significant, overall, the finding is that gender has no significant impact on logistics performance. This is rather surprising, as literature would suggest that there is ample anecdotal evidence for the gender of the logistician affecting the performance of an operation (cf. Kovács and Tatham, 2009). What is more, respondents provided 79 stories in which the gender of the logistician impacted positively (40) or negatively (39) on logistics performance. There is thus a discrepancy between the strictly statistical significance

of the question, and the anecdotal evidence provided by the same respondents. Table III summarises the stories given by the humanitarian logisticians in the survey. The tenor of these comments is still, that both male and female logisticians are needed, but that gender *should not* matter – though it may.

<take in Table II around here>

A closer analysis of the gendered nature of logistics skills reveals that the following skills are deemed predominantly “female”: a number of general management skills such as “finance and accounting”, “marketing” and “customer relationship management”; the functional logistics skill of “legal specifications”, problem-solving skills such as “information gathering” and “information sharing”, and interpersonal skills such as “listening”, and “oral” as well as “written communication”. Interestingly, “negotiation skills” were not seen as “female”, thus not confirming Min *et al.*’s (1995) prior findings. Overall, comparing the “rather female” skills to the general importance of these skills shows that these are en large deemed less relevant for logistics performance. A relevant and gendered, though rather “male”, skill is that of leadership. Two of the functional logistics skills (“transportation” and “warehousing”) were also deemed “male”. Considering the market qualifier nature of functional logistics skills, the perception of these skills being male has far-reaching consequences for women in logistics in general, as the male perception of these skills can represent an entry barrier for females into the logistics profession.

Last but not least, a group split between the general and the humanitarian cohort reveals that humanitarians en large tend to evaluate each of the skills as more male than their business or military logistician counterparts. Generally, thus, it is not surprising that humanitarian logistics is seen as such a male field. Looking at the representation of females in the general workforce, the humanitarian cohort reports a balanced to female-dominated overall organisation, whilst the mean of humanitarian logisticians being female is 20%.

Few exceptions to the more male perception of skills are represented by risk management, inventory management, problem identification and oral communication, which humanitarians perceive as more female than the general cohort.

5. Conclusions and further research

A first, general conclusion of the study is the confirmation of the T-shaped model of logistics skills, both in the general as well as the specific humanitarian sector. The more important is the conclusion that all these groups of skills have an impact on logistics performance. It is interesting, however, that the market qualifier group of skills, i.e. functional logistics skills, is generally deemed less relevant for logistics performance than the market winning skills of problem solving and interpersonal skills. On the other hand, market qualifiers are the basis of the profession (cf. van Hoek *et al.*, 2002), and can thus not be neglected in their significance for logistics performance. This is a particularly important point when looking at the gendered nature of these skills, two of them being perceived “rather male”. Their male perception may create an entry barrier for females to enter the logistics field.

The gender analysis led to surprising findings. The overall conclusion was that gender should not matter for logistics, yet, a large number of anecdotes were provided by the same respondents quoting situations in which the gender of the logistician was in fact of importance. Considering the discrepancy between statistical significance and the anecdotes, the question of gender in logistics deserves more attention in further research.

Generally, however, rather female skills were less relevant, whereas rather male skills were highly relevant for the profession, and for logistics performance. Thus while gender does not matter in most of the skills, the few male skills that stand out carry significant importance for the logistics profession.

There are a number of avenues for further research that should be pursued: based on the survey, a further analysis could be done of the other cohorts (the business, military, as well as academic ones). Moreover, we call for more research on the specific field of humanitarian logistics, and humanitarian logisticians. Understanding the similarities and differences between the different application areas of logistics will help managers to find the right person for their job, and educators to further develop programmes that emphasise the skills needed in these professions.

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Tables and figures

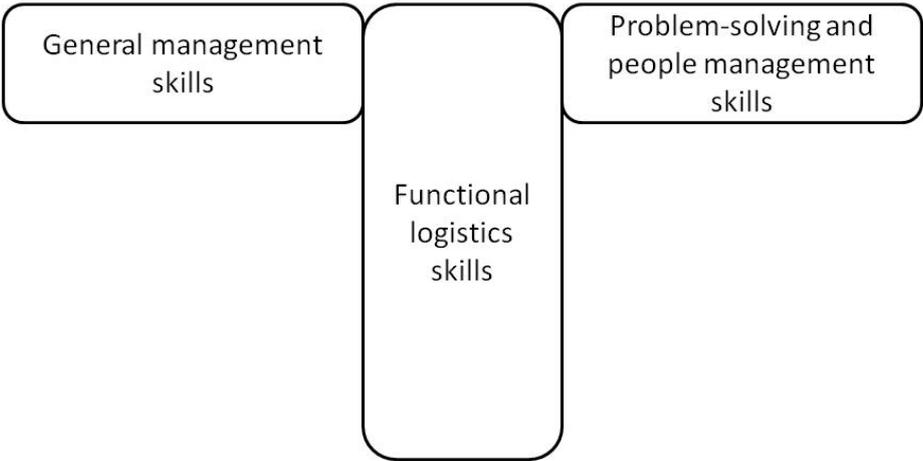


Figure 1. The T-shaped model of logistics skills (modified from Mangan and Christopher 2005, p.60)

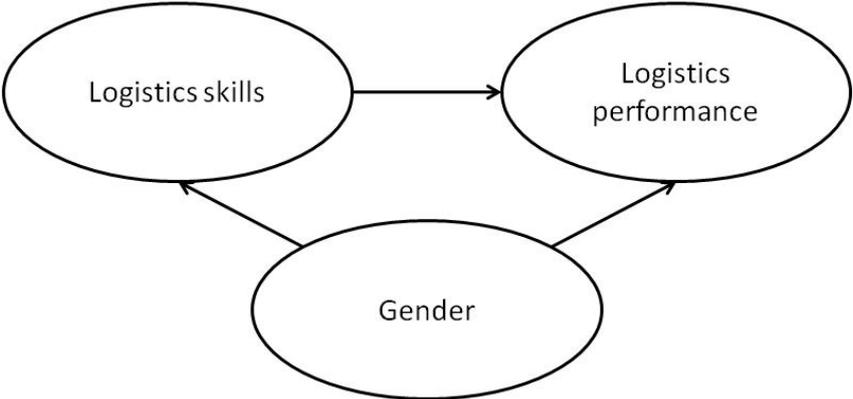


Figure 2. Logistics performance in the light of gender

Table I. Skills in the T-shaped model

General Skills	Management	Functional Skills	Logistics	Problem Solving Skills	Interpersonal Skills
Finance Accounting	and	<i>Legal</i>		Problem Identification	Listening
Information Technology		<i>Customs, Import and Export</i>		Information Gathering	Oral Communication
Change Management		Transportation Management		Problem Analysis	Written Communication
Marketing		Inventory Management		Information Sharing	<i>People Management</i>
Project Management		Warehousing		Problem Solving	Meeting Facilitation
Strategic Management		Purchasing Procurement	and		Negotiation
Customer Relationship Management		Forecasting			Stress Management
<i>Supplier Relationship Management</i>		<i>Reverse Logistics</i>			<i>Human Resource Management</i>
<i>Risk Management</i>		<i>Port/Airport Management</i>			Leadership
		Logistics Information Systems			

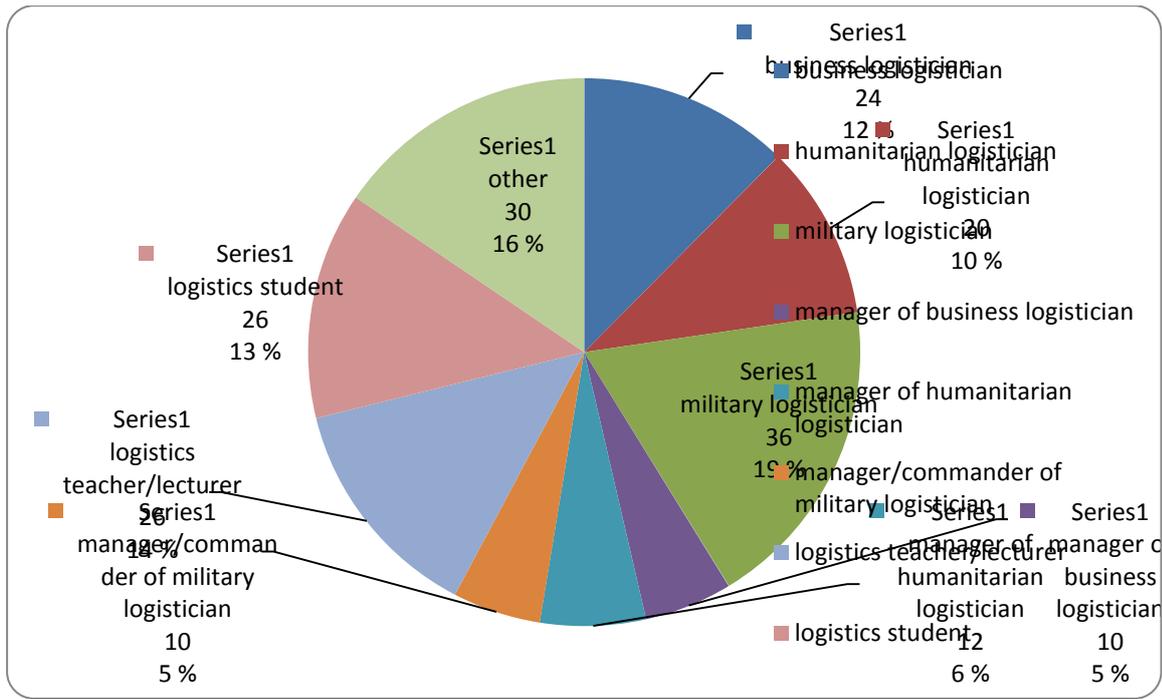


Figure 3: Survey respondent demographics

Table II: Relevance of logistics skills

Logistics skill		Relevance of logistics skill				Gendered nature of the skill			
Logistics skill	Group	N	Mean	Std. Deviation	t	Mean	Std. Deviation	Std. Error Mean	T
<i>General management skills</i>									
finance and accounting	general	148	5.03	1.206	-.653**	3.84	.997	.082	-.222**
	humanitarian	26	5.19	1.096		3.88	.952	.187	
project management	general	148	5.87	1.180	.708**	4.01	1.027	.084	-.148**
	humanitarian	26	5.69	1.258		4.04	.871	.171	
change management	general	148	5.45	1.406	1.832*	3.91	1.081	.089	-.899**
	humanitarian	26	4.88	1.633		4.12	.952	.187	
information technology	general	148	5.61	1.210	.740**	4.14	.881	.072	-1.302**
	humanitarian	26	5.42	1.270		4.38	.852	.167	
marketing	general	148	4.03	1.433	2.538	3.57	.955	.079	-.742**
	humanitarian	26	3.23	1.704		3.73	1.185	.232	
risk management	general	148	5.60	1.233	-.338**	4.12	.961	.079	1.094**
	humanitarian	26	5.69	1.436		3.88	1.306	.256	
strategic management	general	148	5.62	1.377	-.916**	4.05	.875	.072	-.559**
	humanitarian	26	5.88	1.177		4.15	1.008	.198	
customer relationship management	general	148	5.99	1.113	.107**	3.55	1.025	.084	-.940**
	humanitarian	26	5.96	.999		3.77	1.336	.262	
supplier relationship management	general	148	6.13	1.114	.380**	3.68	.990	.081	-2.158
	humanitarian	26	6.04	1.113		4.15	1.223	.240	
<i>Functional logistics skills</i>									
forecasting	general	148	5.89	1.122	.164**	3.89	.905	.074	-.540**
	humanitarian	26	5.85	1.084		4.00	1.131	.222	
customs/import/export	general	148	5.26	1.351	-2.073	3.96	.799	.066	-.436**
	humanitarian	26	5.85	1.255		4.04	1.113	.218	
warehousing	general	148	5.57	1.263	-1.503**	4.24	.923	.076	-.932**
	humanitarian	26	5.96	1.038		4.42	.809	.159	
inventory management	general	148	5.91	1.151	-.072**	4.04	.824	.068	-.869**
	humanitarian	26	5.92	1.197		3.88	.952	.187	
transportation management	general	148	5.95	1.271	-1.980	4.28	1.055	.087	-.664**
	humanitarian	26	6.46	.905		4.42	.902	.177	

purchasing/procurement	general	148	5.60	1.216	-1.557**	3.88	.782	.064	-475**	
	humanitarian	26	6.00	1.131		3.96	1.038	.204		
reverse logistics	general	148	5.43	1.325	1.787*	3.89	.761	.063	-927**	
	humanitarian	26	4.88	1.904		4.04	.871	.171		
port/airport management	general	148	5.04	1.484	-1.207**	4.18	.857	.070	-457**	
	humanitarian	26	5.42	1.528		4.27	1.079	.212		
legal specifications	general	148	5.03	1.382	-.938**	3.91	.750	.062	-108**	
	humanitarian	26	5.31	1.320		3.92	.891	.175		
logistics information systems	general	148	5.99	1.113	1.242**	4.04	.790	.065	-2.024	
	humanitarian	26	5.69	1.123		4.38	.852	.167		
<i>Problem solving skills</i>										
information gathering	general	148	5.84	1.251	-.627**	3.66	1.022	.084	-166**	
	humanitarian	26	6.00	.980		3.69	1.158	.227		
problem identification	general	148	6.20	1.260	-.740**	3.90	.902	.074	.456**	
	humanitarian	26	6.38	.752		3.81	1.132	.222		
problem analysis	general	148	6.18	1.266	-.213**	3.97	.951	.078	-728**	
	humanitarian	26	6.23	.863		4.12	1.033	.202		
problem solving	general	148	6.27	1.164	-.811**	3.91	.971	.080	-801**	
	humanitarian	26	6.46	.706		4.08	1.197	.235		
information sharing	general	148	6.17	1.145	-.425**	3.53	1.180	.097	-479**	
	humanitarian	26	6.27	.874		3.65	1.164	.228		
<i>Interpersonal skills</i>										
management of personnel	general	148	6.07	1.141	-1.351**	4.00	1.003	.082	-1.255**	
	humanitarian	26	6.38	.852		4.27	1.041	.204		
meeting facilitation	general	148	5.25	1.124	1.504**	3.81	.914	.075	-1.356**	
	humanitarian	26	4.88	1.243		4.08	.977	.192		
listening	general	148	5.99	1.091	-.197**	3.45	1.197	.098	-.820**	
	humanitarian	26	6.04	.999		3.65	1.164	.228		
oral communication	general	148	6.02	1.103	.088**	3.71	.935	.077	.269**	
	humanitarian	26	6.00	.980		3.65	1.164	.228		
written communication	general	148	5.75	1.112	-.578**	3.78	.770	.063	-1.065**	
	humanitarian	26	5.88	.993		3.96	.871	.171		
stress management	general	148	5.45	1.300	-1.902*	4.01	1.020	.084	-865**	
	humanitarian	26	5.96	1.113		4.19	.939	.184		

leadership	general	148	6.10	1.165	-1.351**	4.14	.822	.068	-1.385**
	humanitarian	26	6.42	.809		4.38	.983	.193	
negotiation	general	148	5.92	1.140	-.999**	3.94	.942	.077	-.494**
	humanitarian	26	6.15	.881		4.04	.958	.188	

**p>0.1, *p>0.05

Table III: Gender and logistics

Positive stories	Presence of female logistician had a positive impact in terms of better information sharing, improved coordination and record keeping. We recently hired a female warehouse manager in Myanmar operation who was able to manage the transit warehouse with less resources and ensured better coordination within the team.
	Admin skills and customer orientation are usually better developed with women on the other hand, technical skills seem to be better developed with men
	Women are more political and cultural sensitive
	Far less corruption problem (again according to context/country) so generally better on supply and procurement
	When dealing with female beneficiaries
	It has been the "male" logistician who had to deal with all the logisticians in branches. There were situations that he had to face and solve and this would be more difficult for a female logistician.
	Females seem to be especially good at managing information systems.
	In most developing countries men are involved in logistics and often having a woman manager/supervisor creates additional challenges (I say this as a woman manager, though not in logistics). The impact is not because men or women are better at logistics but because of the cultures we have to work in.
	In needs identification given that most of those who are normally affected are women so it is easier for women to access women, understand and interpret their actual needs. Women are also quality focused and know a lot more on domestic needs than technical like choosing generators or vehicles.
	Although humanitarian organizations are striving to increase the number of female logisticians, in most of the areas where we operate women are under respected or simply banned of performing certain activities. In this context performing logistics activities that requires direct interaction with men is challenging, time consuming and most of the time frustrating for women. In Uganda for example, having both women and men working as logisticians has shown that men could perform some tasks such as negotiating procurement of goods or managing staff more easily than women. Having said that it is also true that this ease in interacting with the host community is not related to the capacity or skills of women, but with gender discrimination embedded in the society.
There are countries where both male and female have positive impacts in logistics management.	
Negative stories	Incomplete admin leading to donor non compliance
	Her position in the field may be undermined
	Mostly due to cultural context. In some context it is not wise/possible to have a women to deal with authority or supplier (more generally external negotiation or relation)
	In times of conflict.
	1. Females being put in a position not because they are suitable but because they are females. ie gender policy of the organisation. 2. Field hardship posts requiring stamina.
	In a case of managing delicate intimate needs of women, for example hygiene products which should include sanitary towels. Unless a man is a doctor , nurse or say has medical background then most of them shy off she it comes to dealing with such needs, besides they would not think of them but rather think of vehicles, generators shelter etc not the gender impact of their decision. This we continue to see , recently in Tsunami, Pakistani earthquake etc
	In Sierra Leone, when having community meetings with right holders for a logistics assessment, female logisticians sometimes faced harassment and strong opposition from the stakeholders. This fact in turn delayed the completion of the task in hand and created resistance and lack of collaboration during community assessments.
However, negative impact for female logisticians are in countries where there are serious security concerns and in some place has cultural issues. otherwise, gender is not an issue.	