

# Employment and Family Conditions for Danish Expatriated Engineers

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**Abstract— Danish engineers living and working abroad have – over an 8 year period – been asked about their employment and family conditions. Survey data show that both before and after the World financial crisis they tend to have (top) management positions coupled with a high pay and benefits. Some variations exist concerning spouses attachment to the local labour market, indicating a large variety of family models. The engineers take up foreign assignments out of personal, professional and family reasons, and not because of company pressures.**

**Keywords: Expats, employment conditions, spouse and family**

## I. INTRODUCTION

The phenomenon now commonly known as globalization has had a dramatic effect on the way people move, work and live [1]. One of the central questions posed in relation to globalization is whether this will create a Cosmopolitan orientation, a sense of global village bringing opportunities and stimulating, positive life experiences [2], or confusion and identify crisis for individuals and families, not knowing who they are and where they belong. This has severe implications for companies' opportunities at recruit people to foreign assignments and for the level of success during these.

Fluctuations in World economy during the last two decades have presented us with several interesting challenges, when it comes to the movement of labour. First and foremost the increasing economic globalization [3] has led to unseen growth figures for more than a decade, up to the crisis in the world economy in autumn 2008, and then afterwards the major recession, characterizing specific sectors as well as countries. We have, in other words, experienced a phase where globalization was making the world supposedly flatter [4] and much more potentially mobile for managers and employees. With the arrival of the recession, a contraction of the different national economies, leading to major restriction and obstacles in this area within companies, i.e. the world is curved and mobility patterns are restricted an less predictable [5]. It is in many respects a time period of many – and perhaps profound – changes and this also goes for mobility patterns among employees and their families.

This way the uncertainties characterizing the old economy when it comes to foreign assignments – a relatively high failure rate among male expats working far from home – has been followed by new challenges for expatriates and their families [6][7]. The paramount problem of the training spouse social adaptation [8] will in future more often be supplemented

by a larger variety of challenge for expatriates and their families. Already in the late 1990s Harvey found that 58 % of US couples worked both, and both partners were often employed and psychological committed to work or employed in upward mobile jobs (especially in MNCs) [7]. And the fact that this is not just a US phenomenon is illustrated by the study by Gupta et al. unfolding somewhat similar complexities among Indian couples [9], see also Zhu et al's study of Singaporean families [10]. The economic liberalization in Eastern countries has led to identical challenges of interaction of cognitive reasoning between wife and husband, when relocating locally or to the West. In addition the level of complexity increases, seen from a systemic perspective, when a spouse and several kids participates and can hold different positions. The various types of family configurations – either the man or the woman (or both) being the primary income earner, practicing a single or dual, domestic, international or global career. The family can in this respect be seen a system of interdependent components with a very high level of complexity and emotional attachments creating several paradoxes and dilemmas [7]. Level of conflict and stress have in earlier studies of expatriates work-life balance proven to be rather high and this is potentially increased with the major developments towards a more globalized World, in the East as well as in the West. Finally some authors have found that the family and spouse challenges are more profound in highly collectivist cultures, often characterizing the Eastern countries [9] than in the Western. We could in this light foresee even more difficulties for expat-families, as the Eastern societies go through a much faster economic development now.

An important question to address under such pressures is under which conditions people on foreign assignments are employed and how their family life is organized around them. In this article we would therefore like to carry out an empirical mapping of central employment and family aspects for a distinct group of people, here Danish engineers. It is in some respects a continuation of the classical expatriate on foreign assignment – study, and there still seems to be a need for a certain pool of internationally competent managers and executive, in order to manage the economic globalization process (recession or not). Benson et al. claimed already in 2009, right after the crisis, that the number of first time expats was increasing [10], and that this type of employees was still occupying a very important role in the running of the

multinational companies (MNCs), both in relation to control [11][12] and in relation to management development [13]; [14];[15]; [16] and [17]. This could mean that we in future will see that foreign assignments take several new forms affecting families in a different ways, assignments will vary in time and space.

The claim of the continuous need for expats in companies and organizations is also based on the perspective that the global economy is being highly knowledge intensive, and this seems to challenge organizations and companies continuously – i.e. they have to rely on knowledge-based control forms, where the use of foreign assignments is one out of several different. In particular the transfer of technical and managerial skills, through the use of expatriates, has been one of the key elements in the research carried out [18]. In addition, with the frequently occurrence of international reorganizing, downsizing, outsourcing, and offshoring, the demand for skilled employees could be rather stable, and thereby not removing an employment model often characterizing managers and specialists like engineers.

II. THE DATA

The study is founded on data from four surveys carried out by the Danish Society of Engineers (IDA) – a professional body and trade union for technical and scientific professionals. IDA has about 83,000 members and represents employees, managers, the self-employed, and pensioners within a variety of fields, including pay and employment conditions. The engineers (together with economists) in Denmark have a relatively long tradition for working abroad (e.g. one out of five of all the members of the one economists’ association had been working abroad, see [19]). In this respect, we have a rather interesting population with many experiences in this domain, and they tend to be rather well organized in a limited number of organization. Union density is among university graduate associations; like economists and engineers estimated to be about 76% [20].

Every second year IDA conducts a survey among its members staying and living abroad (during the last decade in 2003, 2005, 2007, 2009 and 2011). The survey has been developed over time, and starting with a few questions in 2003 to a much broader frame today. Thereby only a limited number of data exist across all four surveys. The present article is therefore highly data driven and findings based on access ability to data. The study is based on descriptive statistics, illustrating a development over time in fixed categories, but it also triggers a lot of qualitative questions concerning new developments in spouse and family aspects of foreign assignments i.e. we are relying on standardized data on employment conditions and combining them with attitudinal data concerning the job, family and the future.

It is rather seldom one find these types of aggregate profession data. Even though engineers as mentioned above are one of the groups most sent out on foreign assignments, there is surprisingly little focus on professions. Suutari [13]

studied Finnish engineers and Zhu [10] Singaporean engineers and managers. In addition there are a few cross-sector studies, with a focus on professions [21] compared to the numerous studies of expatriation across companies.

III. RESULTS

The selection of themes from the surveys by IDA is based on pragmatism, i.e. themes that are often bargaining issues between IDA and the employers’ associations, and at the same time reasons of some centrality in the scientific debate concerning expatriation. The following have been selected:

- A. Formal job title
- B. Pay level
- C. Benefits
- D. Reasons for working abroad
- E. Spouse attachment to labour market (type of employer)

A. Formal job title

Formal job title is an important measure of the status of the expatriate, and it can show how many degrees of freedom the expat and his or her family have in organizing and affording a prosperous life. In table 1 below the formal title of the expatriates is illustrated.

**TABLE 1**  
**Danish Engineers, Being Members of IDA, Working and Living Abroad, Formal Job Title, 2003–2011, (%).**

Title	2003	2005	2007	2009	2011
CEO	-	8	7	8	8
CFO, COO, CTO	-	8	9	10	11
Dept. manager	-	16	14	18	15
Specialist	-	22	18	17	23
Project mgt.	-	15	15	17	17
Employed engineer	-	19	21	27	26*
Others	-	12	18	5	-
N:	-	637	551	551	628

Source: IDA, International Member Survey, 2003–2011.

\*Note: Employed engineers and Others are merged

A relatively large proportion of the Danish engineers living abroad are placed in upper management positions: One out of seven hold executive positions and a similar size group is placed in other management positions, i.e. almost one third are

managers. If one also includes project managers, the management group covers about half of the respondents. Only around one forth to one fifth are employees, with no management responsibility, and the figure is decreasing from 21% in 2007 to 16% in 2009 and a further decrease in 2011. This could be a reaction to the economic crisis hitting the World economy autumn 2008, i.e. the number of employed engineers (in non-managerial jobs) has probably been reduced in the cost cutting exercise many Danish companies had to go through. Eighteen percent in 2007 and 16% in 2009 are considering themselves senior specialist and in 2011 it is back to about 1/4 (26 % including “others”). Finally engineers tend to be employees after graduating, and after some year the development either towards the specialist role or the management role starts [22]. The high level of managers and senior specialists is probably also caused by the fact, that quite a large proportion of the engineers have been abroad several years. One out of every three of the participants in the IDA surveys have been out for more than 10 years!

### B. Pay Level

Looking at pay level among the engineers, who are comparatively highly remunerated at national level, we see a similar tendency, as in the case of formal job title. Even though some of the participating engineers have a salary below € 4,000 (probably trainees) many of them are placed much higher € 6,000 and upwards (see table 2).

**TABLE 2**  
**Danish Engineers, Being Members of IDA, Working and Living Abroad, Pay Level 2003–2011, (%).**

Title	2003	2005	2007	2009	2011
< 3,000 €	-	5	6	4	7
3,000-3,999 €	17*	11	10	7	7
4,000-4,999 €	28	16	16	11	11
5,000-5,999 €	23	17	17	16	13
6,000-7,999 €	33**	26	28	28	24
8,000-9,999 €	-	23***	24***	34***	18
10,000-11,999 €	-	-	-	-	9
12,000 € >	-	-	-	-	11
N:	669	662	557	542	636

Source: IDA, International Member Survey, 2003–2011.

\*Note: Below € 4,000, \*\*Note: Above € 6,700, \*\*\*Note: More than € 8,000.

In 2007 – just before the financial crisis - pay before tax,

including pension, was for more than half of all the engineers above €6000 per month. In 2009 about every third was paid more than €8000 per month, and in 2011 one out of five - 20 % - earned more than €10,000 per month.

Pay figures always have to be interpreted with care, because of the many factors influencing nominal levels: composition of the remuneration package, local pay levels in the different countries, local level of taxation, the Danish traditions of rather egalitarian pay structures etc. In addition one of the highly influential factors on pay level is the local level of taxation on pension (e.g. locally paid pension in Malaysia was for many years tax free compared to the +40% tax in Denmark, providing a high incentive to place a large proportion of the pay as pension). Taking into consideration that World crisis has hit many sectors and professions, the pay level of the engineers seems to be continuing at the same level in 2011, and it is rising (partly because of the inflation but also relative, probably because of the increasing level of formal job titles). Pay is still good, and half of the respondents hold management positions; this gives the impression of a group of expatriates with a broader set of competences and skills, rather than narrow functional skills, often provided by lower-level specialists in short spells of time. Work abroad among engineers is not just shorter-term technical assignments but also are the occupation of general managerial positions.

### C. Benefits

Before the economic crisis in 2008 we saw a development towards more complex remuneration packages, designed to ‘sell’ the foreign assignments, to increasingly skeptical – domestic rooted – younger talents and managers. This could first of all increase the number of elements in these packages, showing more ‘exotic’ services and second the amount and value attached to old and new benefits. Pulling in the opposite direction is the post-crisis rationalizations and the general development in the last decade away from the classical ‘gold card expatriation’ [23].

The most often provided benefits to the Danish engineers abroad is pension and health insurance, and second is free IT (telephone, laptop and internet connection) and home trip (and transportation). It is, in other words, rather classical and modest benefits (similar to what many domestic employees receive today and taking into consideration that pension and health insurance is not relevant in many of the European countries).

The services provided are what would be considered a mid-level management package. It is of course limited how many new initiatives can be identified in a survey study like this with fixed answers, but there seems to be neither an end of the gold card expat nor a change toward totally new services and no development toward phasing out benefits, e.g. moving toward local employment terms and conditions. The Danish engineers living with their families abroad seem to be provided with a sufficient support and backup of well-known services.

**TABLE 3**

**Danish Engineers, Being Members of IDA, Working and Living Abroad, benefits 2003–2011, (%).**

Title	2003	2005	2007	2009	2011
- Pension and health insurance	-	57	58	65	66
- Free telephone, PC, broadband etc.	-	41	45	61	58
- Free home trip	24	31	35	48	41
- Transportation/car allowance	27	28	29	40	33
- Partly or total housing allowance	20	26	26	43	34
- Paid leave when child sickness	13	17	25	24	30
- Free language courses	23	25	23	33	25
- Paid overwork	25	26	22	21	24
- Other insurances	-	22	21	25	23
- Full pay on maternity / paternity leave	14	18	18	24	27
- Total or partly paid children's school	15	13	13	22	20
N:	894	719	594	580	568

Source: IDA, International Member Survey, 2003–2011.

*D. Reasons for Working Abroad*

The more than 500 engineers participating in the IDA surveys have been presented with a relatively large variety of options for replying why they wanted to work abroad. Many of them could be categorized as classical in expatriation literature, see Table 4 below.

The answers points in the direction of primary emphasis on personal developmental reasons (first and third upper scores are personal ambition and career; professional development ranging from 40% to 57% during the whole period). Second, the engineers leave for social, positive reasons: Learn about other cultures and family reasons account for 1/3 and 1/5 of the cases. It is in this respect interesting to see, that this particular group of people, which have been categorized as often having an introvert personality [24], are scoring so high on “softer” issues.

In addition it is to a lesser extent choosing to leave Denmark for higher pay, living conditions and lower tax reasons. ‘Demand from company’ is the lowest score for all years! It is only in 2% of the cases (still wish from company is somewhat higher – between 13 and 17% of the cases). But the engineers who work abroad do it for several – positive – reasons: Job, culture and family and not because of pressure from their employer.

**TABLE 4**

**Danish Engineers, Being Members of the Danish Engineering Association and Living Abroad, Reasons for Taking the Job, 2003–2011, (%)**

Reasons	2003	2005	2007	2009	2011
- Personal ambitions and career	57	46	54	55	52
- Learn about other cultures	-	47	48	41	34
- Professional development	44	40	42	44	42
- Family reasons	23	20	23	22	23
- Higher pay and living conditions	-	17	22	18	21
- Lower tax	-	14	14	16	14
- Wish from the company	17	14	13	14	8*
- Others	20	12	13	9	27
- Unemployed	9	12	11	9	12
- Demand from company	2	2	1	2	*
N	774	719	594	548	666

Source: IDA, International Member Survey, 2003–2011.

\*Note: ‘Wish from company’ and ‘Demand from company’ is merged.

*E. Spouse attachment to labour market*

One of the most important elements in a successful foreign assignment is the level of adaptation by the partner. Below are data presented on the accompanying spouse attachment to the local labour market shown (see table 5).

**TABLE 5**

**Danish Engineers, Being Members of the Danish Engineering Association and Living Abroad, Spouse Employment Situation 2003–2011, (%)**

Reasons	2003	2005	2007	2009	2011
- Work as an expat	6	4	4	5	7
- Work in local company	47	45	42	36	30
- Work for int'l organization	5	4	6	7	6
- Work as a volunteer	2	4	5	6	7
- Student	-	-	-	-	6
- Others	-	6	11	12	-
- Does not work	41	37	33	34	44
N	766	424	374	393	297

Source: IDA, International Member Survey, 2003–2011.

As it can be seen above the number of dual career couples – where both are expatriates – is very limited. Only 4-7 % of the spouses work as an expatriate. The largest proportion work for a local company, about 1/3, and almost half does not work. The former seems to be standard (42-47%) for many couples

before the economic crisis and the latter could be caused by the fact that many of the partnering engineers have higher management positions and a relatively good pay. Finally it is in the last survey (2011) a limited number of replies, indicating that the engineers perhaps to a lesser extent have a spouse, or that he or she is staying home (not living abroad, and the engineer then is a frequent flyer, flexiworker etc.). This is of course highly dependent on age and life stage, but we tend to see more variation now than in “the old economy”.

#### IV. SUMMARY

Summing up the development of the five aspects of the Danish engineers' employment and family conditions abroad, we see signs of managerial professionals [25]. Many of them are placed in executive positions, they are well paid, and they receive standard expat benefits. In addition the majority of their partners are locally employed or they do not work. In some respects the challenge of dual career couples are characterizing many families, however the old model – where the spouse does not work – still exist.

The engineers choose foreign assignment out of professional and developmental reasons, and secondly out of cultural curiosity and family terms, rather than a search for better living conditions and tax reasons. The majority of the participating engineers undoubtedly feel pulled more by these career and social factors than they are pushed by their employers, i.e. they have chosen to look for a job abroad, either through a web-based search, personal networks (IDA has established networks of members abroad, sometimes on a Scandinavian basis) inside or outside their organizations, or they have developed their career out there.

Working and living in a foreign country substantially change a managers' view on international work [10]; [26], and international experiences are multifaceted. They consist of many different jobs and job experiences, and they – not to forget – add up [27]. Our claim is that many Danish engineers do go through these processes during their foreign assignments and that they acquire the necessary management knowledge and skills for the development and running of globally distributed work.

Studying this profession for some years now, we tend to believe that several of the participating engineers have been very uncertain about the first foreign assignment before accepting it, and then after having been out there for a period, accepted the second with greater joy or left for another job locally (seeking a promotion). Furthermore, some of them are perhaps making a virtue out of a necessity, meaning their first career choice has made it rather difficult for them to return.

#### Limitations

The study is based on aggregate descriptive statistics, and assumptions are made concerning the individual level logics behind and among the majority of respondents. Which potential complexities and difficulties the families behind the engineers have been through before and during a foreign

assignment, we cannot tell.

Further qualitative studies are necessary in order to find how employment and family models co-work within companies abroad, and, in particular, how small collectives like families move and for what reasons. In addition the IDA surveys used here do not clearly stipulate, what constitutes a shared decision between the respondent and his or her spouse, and decision influenced by the rest of the family.

The respondent's criteria for participating in the IDA surveys are 'Living and working abroad' and being members of IDA. This excludes Danish engineers living in the southern part of Sweden but working in Denmark (commuting daily) and Danish engineers living in northern Germany, crossing the southern Danish border. In other words local cross-border commuters – mainly people doing it for tax reasons – are not included in this study. Similarly, foreign engineers working for a Danish company, in Denmark, and perhaps being sent out on a foreign assignment, are only included if they are members of IDA. This is probably very few people, i.e. one third of the country nationals' mobility and career behavior is not included in the study.

The surveys by IDA are not providing panel data, and interpretation has to be carried out with caution, i.e. people who have declined foreign assignments do not participate in the survey as well as engineers living and working in Denmark.

The international IDA data presented here, on the one hand, has a bias toward more experienced managers. It is directed toward people who are already out there; several of them are in continuously high positions (senior management with perhaps high potential) relying on their social-professional networks, which greatly influence the success or failure of the foreign assignment, as an important element in the continuous career development carried out [10]. IDA organizes many younger engineers; it is, however, not to the same extent their attitudes toward foreign assignments which have been mapped.

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