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# Project Management in Iceland: Current and Future Importance of Project Management within the Icelandic Economy

*- Paper 2 of 3 in a series on the history, status and future of project management in Iceland.*

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## Ágrip

Verkefni og stjórnun þeirra hefur þróast frá því að vera aðferðafræði við áætlunargerð til viðurkenndrar atvinnugreinar sem skiptir sköpum í samfélagi okkar daga. Þessi grein er önnur í röð þriggja undir heitinum *Verkefnastjórnun á Íslandi* og fjallar um mikilvægi verkefnastjórnunar innan íslenskra fyrirtækja og hlut verkefna í íslenska hagkerfinu. Þá eru birtar tvær íslenskar atvinnulífskannanir sem styðja við greiningu á hvað ætla má að muni gerast með fagsviðið verkefnastjórnun í næstu framtíð.

Greinin sýnir fram á mikilvægi verkefnastjórnunar á Íslandi sem hlutfall af vinnsluvirði atvinnuvega hagkerfisins, þ.e. tekjum að frádrögnum aðfangakostnaði. Niðurstöður rannsóknanna gefa til kynna að nálægt þriðjungur af vinnsluvirðinu megi rekja til verkefna. Ennfremur kemur fram að hlutur verkefna mun aukast í næstu framtíð. Niðurstöðurnar eru skilaboð til atvinnulífsins og yfirvalda um þá stefnumótun sem þarf að vinna og útfæra t.d. hvað varðar nauðsynlega fagþekkingu fyrir þarfir samfélagsins á næstu árum. Loks greinir rannsóknin frá tveimur mismunandi aðferðum til að mæla mikilvægi, áhrif og aðra þróun hins "verkefnavædda" samfélags á hverjum tíma.

**Lykilorð:** *Fagsvið, vinnsluvirði atvinnuvega, áhrif, hagnýting, framtíðarleitni.*

## Abstract

The project management profession has evolved from being a simple technical approach to planning to becoming a full-fledged profession that plays an essential role within the global economy. This paper, which is the second of three under the general heading *Project*

*management in Iceland*, looks at the importance of project management within Icelandic organizations and the Icelandic economy. The paper explores the developmental path of the project management profession, looks at the current state of affairs, and identifies possible future trends through two surveys conducted in Iceland.

This study reveals the importance of project management in Iceland, a developed Nordic country, as a proportion of its economy. The study indicates that close to one third of the Gross Value Added (GVA) in the Icelandic economy is based on project-related work. The study, furthermore, indicates that the importance and application of project management will increase in the near future. This sends a clear message to both industry and the public sector on what kind of strategic and tactical alignments and what kind of professional competences are needed for future economy and society. Furthermore, the study describes - and deploys - two methods that can be used to measure the importance and trends within the project management profession and as indicators of what has been named "projectification" of society.

**Keywords:** *Profession, GVA, impact, application, future trends.*

## Introduction

Observing the development of the project management profession from starting off as a rather narrowly defined technical undertaking, to becoming a world-wide profession has been fascinating. The birth of the project management as a formal discipline is traditionally seen as a product of the Cold War (Kerzner, 2009) when the so-called superpowers competed in an arms race to build weapons and other armaments. Large projects were planned and deployed both in the US and the USSR to design bombers, ballistic missiles, submarines and weapon systems. In the US, where the more scientific take on project management was born, projects were often a complex interplay of a number of stakeholders: the military, government, public institutions, contractors and sub-contractors. The enhancement of the planning procedures led to techniques like the development of the Critical Path Method (CPM) and the Program Evaluation Review Technique (PERT) and other the recognizable early signifiers of project management.

When executives in a search for managerial techniques that could be used to cope with the increasingly volatile business environment, discovered project management, interest in the discipline grew steadily. This interest, further, created the need for references and conceptual clarifications, a process that indicated increased "projectification", a concept first used in 1995 by Christophe Midler (Midler, 1995). Originally, the concept referred to a trend that Midler noticed in the Renault car factories and that manifested in the transition from the traditional functional organization in the 1960's to project orientation and coordination in the 1970's. It also referred to the deep impact these changes had on task definitions, hierarchical regulations, carrier management, functions and relationships with suppliers. Since then the term "projectification" has in an organizational context been used to describe the path towards the managerial adaptation, or transformation, of a conventional management to a project-oriented organization. It has also, still further, been used as to describe the growing trend within developed societies to build increasingly on projects and project management for further actualization.

Morris (2012) described the evolution of project management as a move towards system engineering and interest in the "project manager" as an attempt to cope with the human and social challenges of the dynamic system that projects inevitably are. Arguably, the focus on the project as a vibrant organization, rather than as a set of methods, established a turning point in the evolving of the profession. Morris et al. (2012) also describes three major paradigms, or "waves", in the development of project management as a discipline. The first wave was

characterized by normative methods, tools and techniques; the second wave by projects as temporary organizations, with methods to work with risk and contingency, planning, and models that were used to rethink project management.

The third wave has seven characteristics; (1) interest in the history and distinct theory of projects and project management; (2) increased awareness of the importance of context or how a project is a part of the social and sectoral enterprise; (3) interest in understanding how projects and organizations are linked; (4) interest in how strategy and projects are linked; (5) interest in how projects are used as vehicles to innovate for the future; (6) interest in the role of leadership and the role of human behavior in shaping trust and creating a cooperative atmosphere; and (7) interest in seeing projects as complex, risky and across-the-firm relationships, in an attempt to adopt to uncertainty, manage novel ventures and deal with special challenges through learning and knowledge integration.

Publications in the field of project management also indicates how the profession advanced over time. Three significant journals focusing on project management specifically are: (1) The International Journal of Project Management (IJPM published by Elsevier), (2) The Project Management Journal (PMJ published by Wiley) and (3) IEEE Transactions of Engineering Management (IEE-TEM published by The Institute of Electrical and Engineering Management Technology Council) (Turner et al., 2012). In 1987 there were 6 papers in IJPM, in 2007, the number had risen to 366. In 1987, there were 2 papers on project management in PMJ and in 2007, they were 67, and in IEE-TEM there were no publications in 1987 but 29 in 2007. The diversity of topics had also increased. In IJPM, 45 topics were addressed in 1987, but this number had escalated to 168 topics in 2007. A similar trend can be verified with other journals (Turner et al., 2012). In times when academics are constantly being pushed to publish, it can be assumed that this trend has continued.

The International Project Management Association (IPMA) that was established in 1965 had, by the end of 2013, certified more than 194,000 individuals worldwide (IPMA, 2014). The Project Management Institute (PMI) was established in 1969 and the British Association for Project Management (APM) in 1972.

Also, an essential part of the development of the project management profession, was the issuing of Book of Knowledge (BOK) protocols with guidance of how project portfolios and programs to link strategy and operations. In the UK, the *Association for Project Management (APM)* has issued the *APM Body of Knowledge* that is an up-to-date collection of topics that should be known to PPP practitioners, academics and experts. Detailed protocols in regard to projects and programs for coordinating strategy, tactics and operations via projects, programs and portfolios of projects can also be found in the standards issued by the *Project Management Institute (PMI)*. In particular, the PMI has issued standards on project portfolios management (*The Project Portfolio Standard®*), which denotes that a portfolio is a component collection of programs and projects specifically managed as to achieve strategic objectives (PMI, 2012). PMI also issues standards on project programs (*The Program Management Standard®*), providing guidance to manage multiple projects where project feasibility is the key to answering and verifying the proposed direction (PMI, 2006:100). Furthermore, PMI issues standards on projects (*Project Management Body of Knowledge - PMBOK®*) (the latest version being PMI, 2017). Both APM and PMI have grown rapidly on all fronts. In 1992, the number of members of APM was 5,000; in 2010, that number had increased to 17,500. In 2009, the number of members of PMI had risen to more than 300,000 in two decades (Hodgson and Muzio, 2012).

There is little doubt that the project management is an important profession that helps project owners and organizations of all kind to actualize themselves through successful projects.

“Projectification” of society and the economy is a factuality even though the actual economic impact has hitherto not been overly well defined.

In Iceland, a similar development with regard to professionalism in PPP management has been taking place it happened there few years later in time—and there are some interesting anomalies, as discussed by Ingason, Fríðgeirsson & Jonasson (2019).

The key promoter of the discipline of project management is the *Project Management Association of Iceland* (VSF). VSF was founded in 1984, with the mission to lead and enhance the development of project management (VSF, 2017a). Arguably, the most notable activity of VSF is the function of certifying professional project managers in collaboration with the IPMA (International Project Management Association). This process has been taken place since 1997 and gone from strength to strength. Currently, 1566 project managers have received certification on all of the four different IPMA levels (A, B, C and D) (VSF, 2017b). The birth of project management as a profession in Iceland was also consolidated by a post graduate study line/course, Master of Project Management (MPM), established in 2005. More than 300 project managers have graduated through the MPM programme (MPM, 2017).

The project management profession has been gaining an international momentum and Iceland has followed along the same path. Ingason, Fríðgeirsson & Jonasson (2019) conclude that project management is on the verge of becoming an established profession in Iceland; a profession with a solid theoretical knowledge base, best practice references, strong educational programs, academic research activities and occupational interest groups. However, in spite of this success and the projectification of the private and the public industries, the economic impact is more or less unknown.

“Success” is also a relative concept, as projects in Iceland, especially public projects, have frequently come under scathing criticism and are subject to controversy and debate. Fríðgeirsson (2015) investigated public projects and project governance in Iceland and concluded that large projects have serious cost overrun problems (9 out of 10 projects had cost overruns). In the study by Fríðgeirsson (2015), the Icelandic project governance framework is considered to be lacking behind when compared with in countries like Norway and the UK. It is, therefore, an imperative to document information on projects and their management (or lack thereof) not only in the light of their success, but also with regard to how they have failed to pave the way for improvement.

Despite the small population (330.000 inhabitants), Iceland is a prosperous country with a GDP of 50,936 USD per capita in 2015, according to the UN, placing the country in 12<sup>th</sup> place in the world. In 2013, 78% of Iceland's export value and 59% of imports came from countries within the European Union (Hagstofan, 2016). Economic growth is relatively very strong (7,2% GNP in 2016) and Iceland's prospects are generally considered favorable (Hagstofan, 2017).

As stated earlier, the economic impact of work done in projects is not fully clear. This is unfortunate, as the monetary worth of projects as a percentage of the larger economy is an important metric to the impact of project management for society. If the impact of projects on the economy is significant, it should be instrumental for government and business leaders to master the profession of project management and the importance of the project management profession should be reflected both in governmental and industrial strategies.

The first serious attempt to outline the economic impact of projects was arguably carried out by Wald et al (2015) and applied first to the German economy. The initial study of Andreas Wald and colleagues provided a platform for studying the Icelandic projectification and the economic impact of projects. The present study is intended to pursue the following objectives:

1. Investigate the relevance of projects and project management for Icelandic industries.
2. State the current economic impact of project related work.
3. Project the trend of the profession in the near future.
4. Describe an alternative method for projecting the trend in the future.

## Methodology

With the aim to investigate the proportion of the Icelandic economy that is project based the authors build partly on a method developed by Wald et al. (2015). In addition, a benchmark study among over than 1300 managers was conducted to explore (1) the current application and impact of project management in Iceland, and (2) how the application and impact of project management is likely to evolve in the near future (next 12 months).

### *The GVA (Gross Value Added) by Projects in Icelandic organizations/sectors*

No direct financial figures are available on the economic impact of projects or the degree of projectification within Icelandic industries. Ideally, measuring the share of project work in the larger economy would build on established macroeconomic measures of added value, such as the gross domestic product (GDP), the gross national product (GNP), or the gross value-added (GVA). The GDP is the total monetary value of all goods and services produced over a specific time period and would be difficult to apply as a metric for projects. The same applies for the GNP, which indicates the value of all finished goods and services in a country in one year by its nationals. Both for the GDP and GNP it would be difficult to isolate projects from the interactive stream of transactions within the economy. However, the GVA is suitable for this study. The GVA represents the monetary value of the goods and services that have been produced, after the cost of the inputs (i.e. raw materials) that can be attributed to the production has been subtracted. The GVA is, in short, a productivity metric that measures the contribution of work to society (or the producer, section region, etc.).

A measure of the output and the value-added of project work seems, therefore, to be the best approach for measuring the share of project work, as it could be directly compared to the total GVA. However, this approach also has its challenges, such as the variety of projects is inevitably reflected in the variety of project outcomes. For example, the output of a project that delivers a product or service with a dedicated market price has very different properties to that of a new product development project or an organizational change project. In theory, all projects should have a value, direct or indirect, for the organization. However, it might be difficult to define a specific (monetary) value to, for instance, an internal change project. This allocation problem mainly results from an unclear time horizon in which a change project delivers measurable monetary results, and from the questions, whether, to what extent and with what degree of quality the change was achieved. In addition, the revenues directly attributable to the projects must be recorded to obtain an output-oriented measure of project work. This data is only available for projects which lead directly to revenues. Internal projects, such as change projects, would be ignored as well as nearly all projects in the public sector. Therefore, any measurement based on the project output seems to be difficult, especially across project types.

For these reasons, Wald et al. (2015) used the proportion of project work as a percentage of total work (measured in working hours) in an organization as the key indicator of the level of projectification. This input-oriented measurement can be applied to all types of projects, e.g. revenue generating external projects, but also internal change projects. It can be applied to all kinds of industries, and it is independent of organizational factors.

A project is an undertaking largely characterized by the uniqueness of the conditions in their entirety. More specifically, an undertaking is defined as a project in the present study, if it fulfills the following conditions:

- A specific target has been defined for the project.
- The project is limited in terms of time (start and end).
- The project requires specific resources (e. g. financial, staff, etc.).
- An independent process organization exists, which is defined as different from the standard organization in the company.
- The project work is based on non-routine tasks.
- The project has a minimum duration of four weeks.
- The project has at least three participants.

Based on this definition of projects, respondents were asked to indicate the proportion of project work, as a percentage of the overall work worked within the organization, in the entire organization. This resulted in figures indicating projectification on the company level. The share of project work of the individual economic sectors (each containing different sub-sectors) was calculated as a mean value. Finally, the share of project work on the level of the entire economy was obtained by adding up the sectors' shares of project work, weighted by the sector's share on total GVA (see Wald et al., 2015 for more details).

#### *Benchmark Study: Current and possible future value project work in Iceland*

The benchmark study conducted was used to measure and compare the metrics against the GVA baseline study and run on a regular basis (quarterly) to evaluate how the perception of participant changes over time. The study was designed to verify the alleged importance of project management within organizations by asking a larger sample of participants that are more homogeneous than the sample of participants in the GVA study, in many cases, managers and leaders who passed on the requests for economic figures to subordinates. As the benchmark study was solely conducted among people in high management positions in their companies these two studies will complement each other and give clear indication of the present and future state of project management in Iceland. The definition above of what constitutes a "project" was introduced to the participants, and the sample of 1,356 participants were asked about (1) the application of project management within their organization in compliance of the definition of projects by Wald et al. (2015), and (2) the what they saw as a likely trend in the application of project management in the near future (12 months) within their organization. The survey was embedded in a management survey that is done quarterly by a survey company named Market and Media Research (MMR). Compared to the GVA the method was simpler, it included more participants, and was less costly. The survey measured, among the participant, the overall perception of project management and the application of it as a discipline. As the management survey is ongoing, and conducted four times a year, valuable information on the development of the PPP profession can be observed over time.

The NACE (Nomenclature of Economic Activities) economic sectors classification was used as a basis to ensure international comparability (see figure 1) but it is the European statistical classification of economic activities. Statistics produced on the basis of NACE are comparable at European level and, in general, at world level through the United Nations' International Standard Industrial Classification (ISIC). Despite industrial structural differences between Iceland and Germany, the same 10 industrial sectors were used. For the sake of simplifying the study, four sectors - construction, real estate, corporate service providers and agriculture - were excluded from the survey but their impact estimated by experts instead. The same weights were used in Iceland as in Germany.



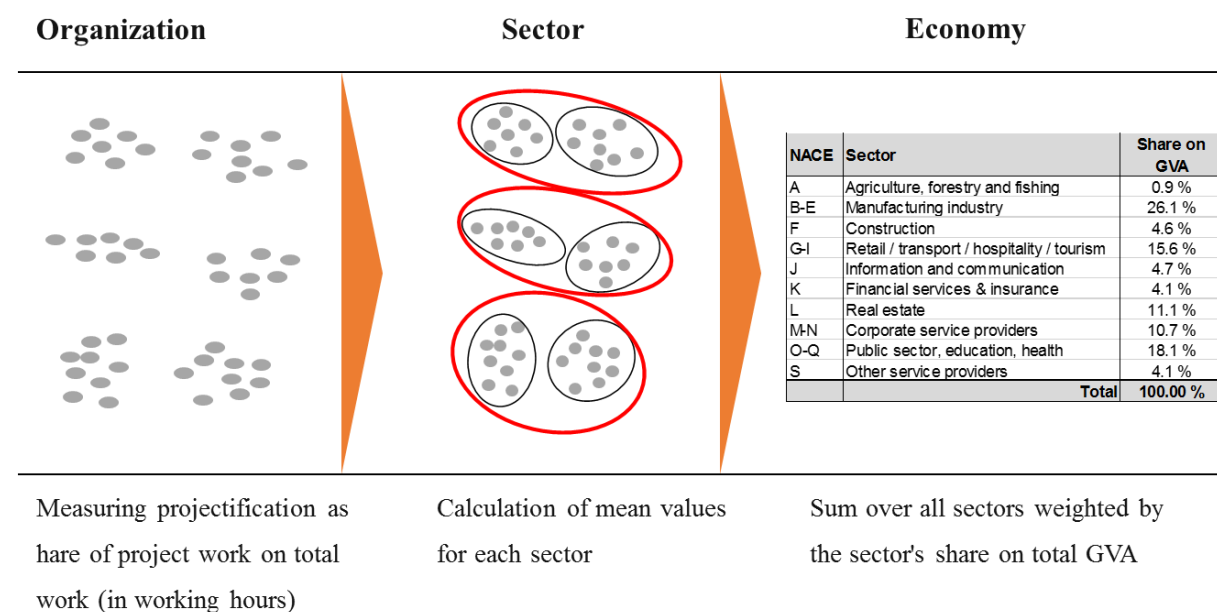


Figure 4. Process of data aggregation (Source: Wald et al., 2015: 26).

A research company was hired to conduct the data collection. A list of questions was sent to participants within targeted organizations, this was followed by emails and then telephone interviews. The population sample included the 1,000 largest organizations in Iceland and the final sample included 142 companies with an average size of 125 employees. All in all, 18 questions were asked on internal and external projects and economic figures on sectors were obtained from the Iceland Statistics (Hagstofan, 2016).

**Results**

The results from the two studies are introduced separately: First the results from the GVA study will be presented and then the results from the Benchmark (MMR) study.

*Results from the GVA study*

The primary research in the GVA study delivered 142 answers on the value of project categorized by the six sectors included in the survey. For clarification, the total Gross Value Added in Iceland in the year 2014 was 1.530.775 m ISK (figure 2).

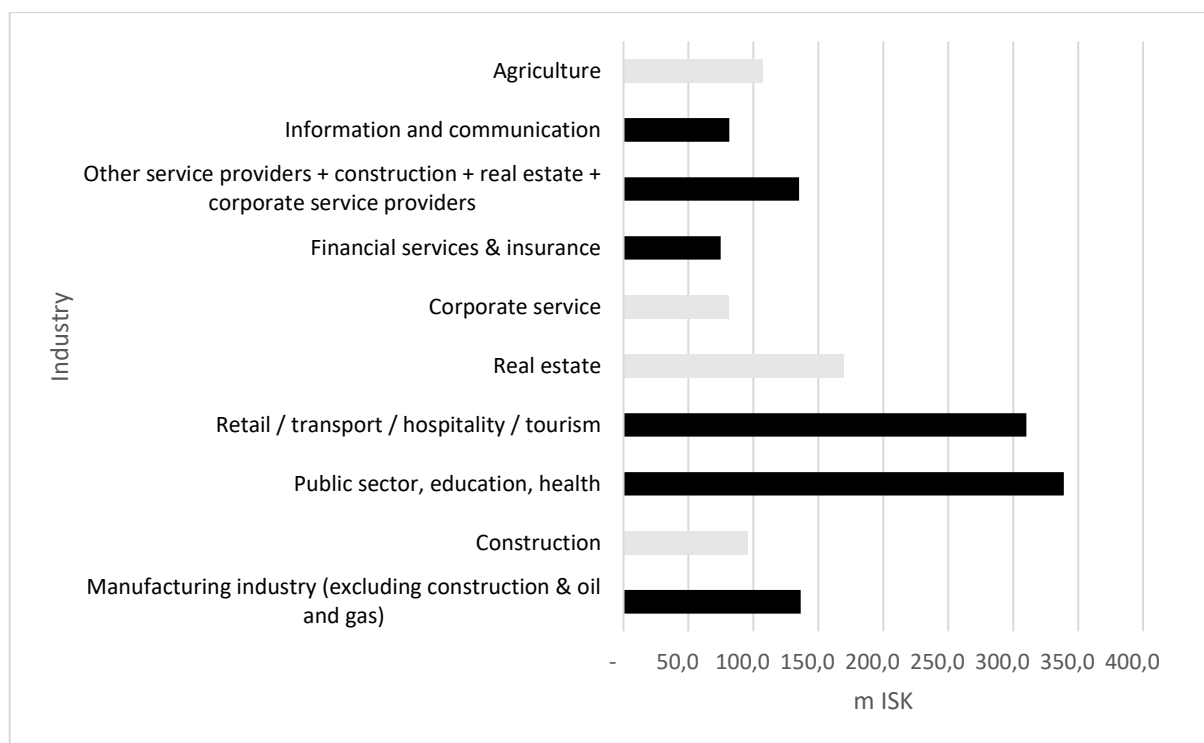


Figure 5. The Gross Value Added (GVA) of Icelandic industries (grey columns = estimated values).

The largest sector generally in terms of Gross Value Added economically turned out to be the public sector, followed by the retail/transport/hospitality sector and then industrial manufacturing. Next, the projects were categorized according to whether they were internal or external projects. The internal projects were then classified into types.



	Internal Projects					External Projects	n
	Organizational / HR projects	IT projects	R&D/New product development projects	Marketing/sales projects	Infrastructure projects	No. of cases Commissioned projects	
<b>Manufacturing industry</b>	14%	14%	20%	<b>21%</b>	14%	17%	24
<b>Retail/transport/hospitality/tourism</b>	17%	<b>22%</b>	18%	15%	20%	9%	39
<b>Information and communication</b>	20%	<b>23%</b>	16%	10%	20%	10%	17
<b>Financial services &amp; insurance</b>	16%	16%	15%	18%	<b>20%</b>	16%	9
<b>Public sector, education, health</b>	16%	<b>20%</b>	15%	20%	19%	10%	41
<b>Other service providers</b>	14%	<b>21%</b>	17%	17%	14%	16%	12
<b>Total</b>	16%	19%	17%	17%	18%	13%	142

Table 5. The ratio (%) of projects classified by project types and external/external projects.

The internal project types ratios are, on average, very similar across the sectors. Among all projects from different sectors, IT and infrastructure projects score highest and organizational and human resource (HR) projects scored the lowest, however, the range is only 3%. The external projects are relatively fewer (13%) and the range is also higher, as the cross industrial differences are 6%. The majority of Icelandic projects ( $\approx 85\%$ ) are internal projects, with IT projects being the most frequent/numerous.

Next is the relative share (%) of work assigned to projects in different industrial sectors at three instances in time—the past (2009), close to present (2014) and in the future (2019). The year 2014 was selected to exhibit the present situation, partly due to reliable information access and partly to be able to compare the results to the German study which was conducted earlier.

NACE Code	Sector	Share of project work 2009	Share of project work 2014	Share of project work 2019 F
A	<b>Agriculture, forestry and fishing*</b>	4,0%	4,0%	4,0%
B-E	<b>Manufacturing industry (excluding construction)</b>	2,6%	3,4%	4,6%
G-I	<b>Retail / transport / hospitality / tourism</b>	13,1%	18,2%	24,4%
J	<b>Information and communication</b>	39,2%	47,8%	51,2%
K	<b>Financial services &amp; insurance</b>	34,8%	34,2%	37,5%
O-Q	<b>Public sector, education, health</b>	32,1%	33,3%	40,9%
L	<b>Real estate</b>	2,0%	2,0%	2,0%
F	<b>Construction*</b>	80,0%	80,0%	80,0%
M-N	<b>Corporate service providers*</b>	60,0%	60,0%	60,0%
S+F+L+ M-N	<b>Other service providers</b>	37,2%	42,7%	47,2%
	Total	25,0 %	27,7 %	31,5 %

Table 6. The share of work (%) assigned to projects in different sectors at three points in time.

The average share of projects in according to the GVA in Iceland was 25% in 2009 and is expected to rise to 31,5% in 2019. That is a relative growth of 21%.

#### *Results from the Benchmark study*

In the benchmark study the population included 1,356 managers and 768 of these answered (56,6%). The responses were linked to turnover, no. of employees, industrial sector, trade and region. Figure 5 includes the results from the question: *Do you think that the impact of project management will increase, stay the same, or decrease in the next 12-month period?*

<b>Do you think that the impact of project management will increase, stay the same or decrease in the next 12-month period?</b>					
<b>Turnover (m ISK)</b>	Huge increase	Considerable increase	The same	Considerable decrease	Huge decrease
Less or equal to 199	6,7%	39,6%	52,4%	0,5%	0,5%
200-999	8,7%	47,6%	43,0%	0,5%	0,5%
1000-5000	8,8%	54,4%	35,3%	0,5%	0,5%
More than 5000	11,3%	62,3%	25,5%	0,5%	0,5%
<b># of employees</b>					
Less than 10	5,8%	39,0%	53,1%	1,0%	1,0%
11-49	10,3%	49,4%	39,7%	0,5%	0,5%
50-149	4,9%	60,8%	33,3%	0,5%	0,5%
More than 150	11,8%	63,5%	22,4%	2,0%	0,0%
<b>Occupation</b>					
Manufacturing	9,1%	38,6%	51,5%	1,0%	0,0%
Service	9,1%	56,0%	33,3%	1,0%	0,5%
Retail/wholesale	3,2%	43,2%	52,8%	0,5%	0,5%
Fisheries/food production	5,6%	42,6%	50,0%	2,0%	0,0%
<b>Industry</b>					
Consumer market	7,7%	47,5%	42,1%	2,0%	1,0%
B2B market	10,6%	46,5%	42,4%	0,0%	0,0%
Both	5,7%	52,0%	41,3%	0,5%	0,5%
<b>Area</b>					
Capital area	9,3%	47,1%	42,4%	1,0%	0,0%
Rural area	4,1%	51,2%	43,5%	1,0%	0,0%

Table 7. The total results of questions on the development of project management impact.

To have a clearer picture, the participants believing that the impact will increase are added together. The results are decisive, as approx. 60% of the managers asked, do expect increase of both of the application and importance of project management. Hardly any of the managers asked think that project management will decrease in importance in the immediate future.

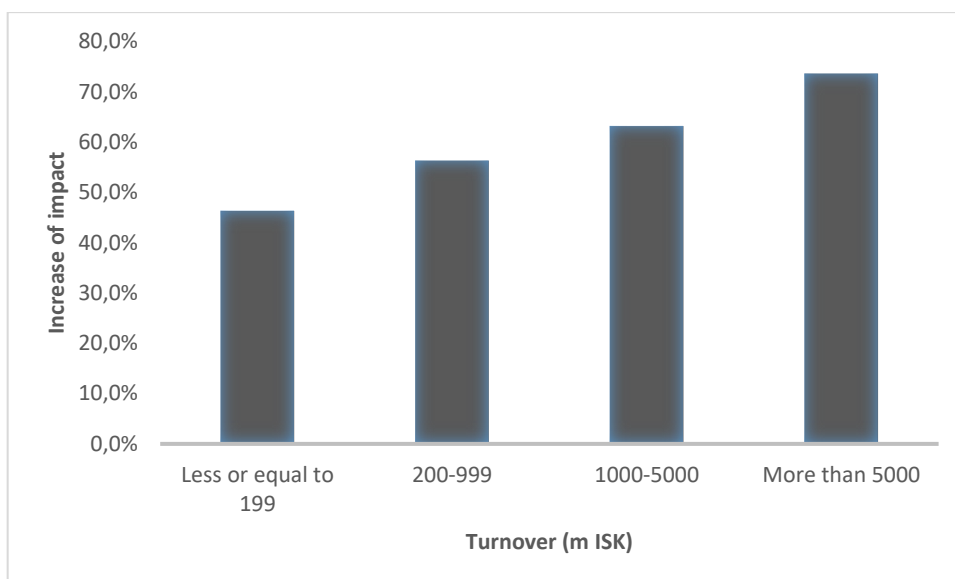


Figure 6. Increase of project management impact in the context of capital turnover (m ISK).

Figure 6 shows graphically how the impact increases as turnover increases ( $R^2=0,98$ ).

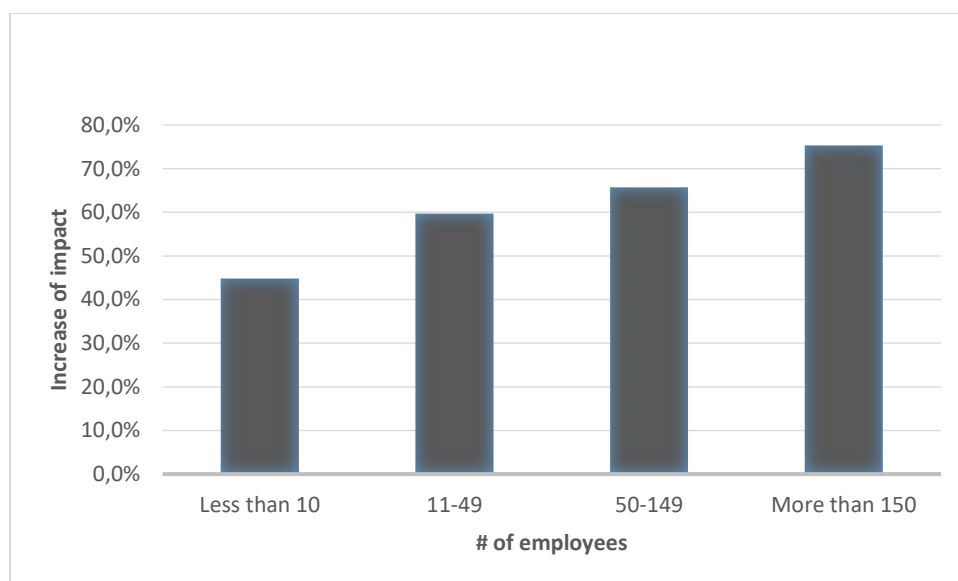


Figure 7. Increase of project management impact in the context of number of employees.

Figure 7 shows graphically how the impact increases as no. of employees increases ( $R^2=0,98$ ).

Figure 8 includes the results from the question: *How common or uncommon is the application of project management in your company in the context of the description of the discipline?*

<b>How common or uncommon is the application of project management in your company in the context of the description of the discipline?</b>				
<b>Turnover (m ISK)</b>	Very common	Rather common	Rather uncommon	Very uncommon
Less or equal to 199	7,9%	22,8%	34,4%	34,9%
200-999	14,9%	28,1%	31,4%	25,6%
1000-5000	19,7%	33,3%	28,0%	18,9%
More than 5000	30,2%	42,5%	21,7%	5,7%
<b># of employees</b>				
Less than 10	6,9%	23,6%	34,4%	35,1%
11-49	16,1%	28,9%	35,6%	19,5%
50-149	13,7%	45,1%	24,5%	16,7%
More than 150	37,3%	44,6%	16,9%	1,2%
<b>Occupation</b>				
Manufacturing	19,0%	31,7%	28,6%	20,6%
Service	19,7%	30,7%	24,6%	25,0%
Retail/wholesale	4,2%	18,5%	47,9%	29,4%
Fisheries/food production	6,0%	32,0%	34,0%	28,0%
<b>Industry</b>				
Consumer market	10,7%	25,4%	36,2%	27,7%
B2B market	19,5%	27,2%	27,2%	26,2%
Both	15,1%	37,4%	28,4%	19,1%
<b>Area</b>				
Capital area	14,5%	32,1%	29,6%	23,7%
Rural area	10,8%	24,8%	33,8%	30,6%

Table 8. The total results of questions on the development of project management application.

The application of professional project management increases with the size of the organization. For instance, only 30,5% of the smallest companies deploy project management, whereas 81,9% of the largest companies do. Professional project management is most widely used within the manufacturing and service sectors, however, least applied within the retail and wholesale sectors. Project management is also significantly more frequently applied in the capital areas than the rural areas; 46,6% and 35,6% respectively.

To gain a clearer picture, the participants who are of the opinion that the application of project management will increase are added together. The results are decisive - particularly in the context of the numbers of employees - as approximately 70% of the managers believe there will be an increase in the application of professional project management within their sector. Figure

9 shows the increase of projects as a percentage of monetary turnover. And Figure 10 shows the increase of projects as a percentage of the number of employees.

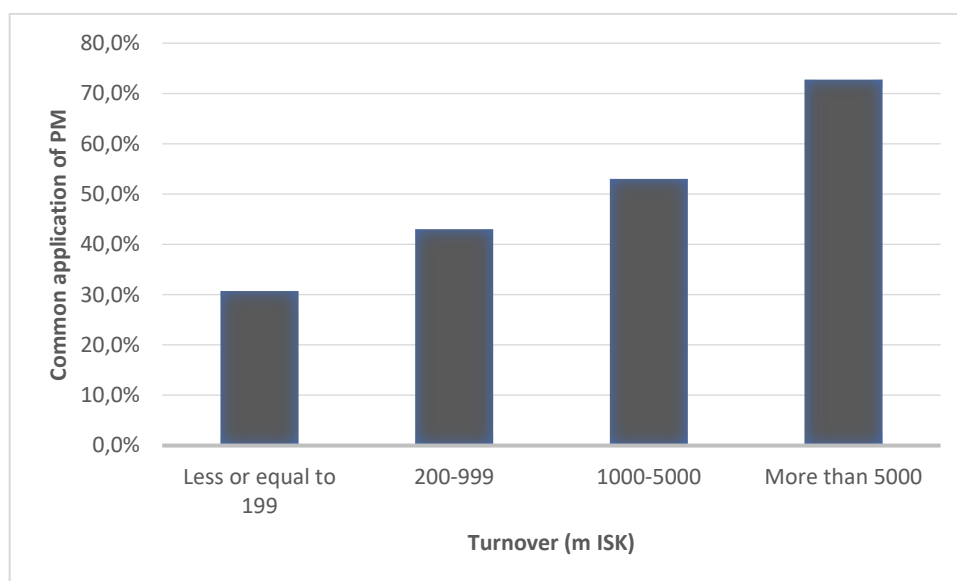


Figure 8. The increase of project commonality in the context of turnover (m ISK).

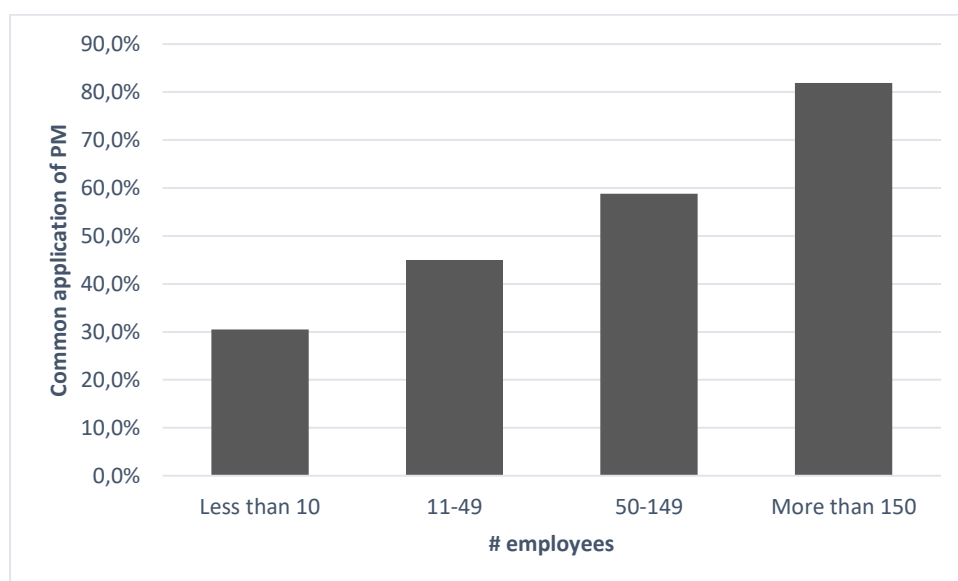


Figure 9. The increase of project commonality in relations to number of employees.

## Discussion

The economic results are interesting, as they indicate that 27,7% of the GVA in the Icelandic economy are contributed via project work. This is somewhat less than in Germany and Norway (Wald et al., 2015, Wald et al, 2016), but nonetheless a significant part of the overall national economy. Moreover, the participants estimate that this will rise to 31,5% in coming years (2019) which means a relative growth of 21% in work assigned to projects from 2009 to 2014.



Another interesting result is that there is a significant difference in the view of the managers in the context of the size of the organization. Trust in the growing impact of project management increases in positive correlation with the number of employees and capital turnover of the company.

The results are also significant in verifying the importance of project management in the Icelandic economy. Close to 50% of the managers in the different industries agree that the use of project management is common. Again, the same trends are spotted as before. The size of the company shapes the attitude towards the application of project management in compliance with the description of the discipline provided in the survey. To cite an example, 30,7% of managers in companies with a turnover of less than 199 m ISK find project management to be very common or rather common compared to 72,7% among their peers in companies with a turnover exceeding 5000 m ISK. This is a relative difference of 137%. The difference is even more striking when compared to the number of employees.

In spite of significant interest in project management in Iceland and a strong response from industry and academia, other studies indicate insufficient governance platform (Friðgeirsson, 2015). When the economic impact is considered, the call for reforms in the public sector is urgent, a claim that is supported, for example, by the reports published by the Icelandic government (INR, 2016).

Another interesting contribution is how the high-level managers on Icelandic organizations view the importance of projects and project management. Their interest both in the profession as such and in apply project management clearly shows, and their belief in the significance of project management is positively correlated with the size of the organization they manage. All this indicates a progression towards the increased appreciation for the project management profession.

Two very different research approaches were used in the research. The first was a detailed survey of the economic impact of projects through the application of a method that had already been tested in Germany. This method yields a quantitative assessment of the gross added value of project work within the country's economy, and a prognosis on how this will evolve in the near future. The second was a general survey of a large sample of managers in Iceland, where they estimated the present and future level of projectification of their organisations. But in context the results yield a very revealing portrait of the projectification of the Icelandic economy, which can be viewed in reference to the size, turnover and type of the organisations, as well as other variables. The two research approaches complement each other and could be applied in a systematic way to give a longitudinal view of the evolution of projectification in society. The first part is more complicated and expensive in execution, and could be done with longer intervals, whereas the second part takes less effort and can be used to monitor the evolution more regularly.

## Conclusion

This study had four objectives; (i) to investigate the importance of projects and the project management within Icelandic organizations, (ii) to investigate the importance of projects and project management within the Icelandic business community, (iii) to investigate whether the project management profession is becoming stronger or not, and (iv) to describe an alternative method for measuring the impact of projects. All objectives were met, and the research finding clearly demonstrates how instrumental projects and their professional management are for modern societies.

This study reveals that project work contributes greatly in terms of economic value to the Icelandic economy. This correlates with findings in other countries where the economic contribution of project management has been studied. In Germany, 37,7% of the GVA in the economy can be traced to projects, and in Norway this number is 32,6% (Wald et al, 2016). In these countries, forecasts indicate further increased importance of project work in the near future. In Iceland, 27,7% of the GVA can be based on project related work, indicating that the monetary benefits of projects is in 2014 vicinity of 425 billion ISK (0,277 x 1.530.775 m) a year and growing. Forecasted numbers are 31.5 in 2019.

Based on these findings it becomes clear that project management knowledge and professional experience, should play a major role as a part of the overall strategies and tactics in all sectors of the economy and society. In light of the large sums of money funneled through the economy via projects, every improvement, be it big or small, results in financial rewards. It is timely to consider how much projects influence industry, the public sector, the economy and society. This study can also be seen as a contribution to further the development of metrics that can inspire future visions and strategies with regards to the development of the project management profession.

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