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BUSINESS ANALYSIS AND STRATEGY ANALYSIS: SHOULD IT BE CONSIDERED BY ACADEMY IN SOFTWARE DEVELOPMENT?

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ABSTRACT

Some causes of the poor success of IT projects are related to a misunderstanding of requirements and, ultimately, to nonalignment between software requirements and strategy. We propose the question: Should business analysis and strategy analysis aspects be considered in software development academic literature? The aim of this paper is to evaluate how the academic literature is concerned with the alignment between business and strategy aspects with IT and software development aspects, looking for gaps in the literature. In particular, we are looking for the attention given by academic literature to the BABOK model and its application in the software development context.

KEYWORDS: Business Analysis, Strategy Analysis, Software Development & BABOK

1. INTRODUCTION

There is a common sense that IT projects usually fail, particularly when software development projects are considered (Reel, 1999; Charette, 2005). Besides technical causes, several causes are related to non-technical aspects as well human behavioral skills such as poor understanding of requirements (Baruah, 2015). Another important cause is that project managers do not systematically develop business cases to ensure alignment with business needs, which can lead to unnecessary risks in implementing the project (Berghout & Tan, 2013).

One of the problems pointed out by business analysts and project managers responsible for raising business requirements is that internal users or customers bring their solutions ready and the essence of problems is often neglected (Larson, 2008). Software development projects should have an alignment between strategic planning and information technology initiatives.

The aim of this short paper is to evaluate how the academic literature is concerned with the alignment between business and strategy aspects with IT and software development aspects, looking for gaps in the literature. In particular, we are looking for the attention is given by academic literature to the BABOK (Business Analysis Body of Knowledge) model and its application in the software development context.

2. LITERATURE REVIEW

2.1 Business and IT Alignment

The importance of this alignment is applying resources in projects that bring real benefits to business and avoid distortions, such as focusing on projects that do not reflect the company's strategy. This alignment in most cases has a grip

problem, too, due to ineffective communication and the processes of the specification.(Doumi, Baina&Baina, 2013) created a metric that aims to measure the alignment business and information technology and shows that only 66% of business processes are aligned to the strategic objectives of the company and 34% of business processes have some alignment problem with strategies,(Jorfi& Jorfi,2011)concludes that there is a direct relationship between effective communication and alignment of business and information technology. (Bjarnarson et al, 2016) emphasize communication to facilitate the alignment using TCR (Test Case Requirements).

The *business-driven approach* is a top-down strategy drawing a broad picture derived from strategy, expected business value, business needs, and business problems. This broad picture deploys the business requirements, which derives software requirements. This is quite different from the software engineering approach, the main focus of which is the information system needs. Business Analysis is a knowledge area from the BABOK model (IIBA, 2015) created to bridge the gap between the understanding and representation of business requirements and the IT area, to create a good requirement specification, to facilitate a good IT solution delivery. We here advocate the idea that a good requirement specification depends on at least understanding the alignment with business strategy.

The BABOK has a practical approach with some techniques and processes that can help to solve this problem. The importance of the BABOK model is that this is an appropriate scope in the approach between Strategy alignment as the first step to communication and description of IT project requirements. This model is well known in the professional work environment but little known in the academia. In other words, it is important to say that the BABOK model scope comprises several steps, all of them referenced in the academic literature, and the advantage of this model is to bring together all of these components in one model. In this context, the original purpose of our search was to understand how to make a decision on to continue or to suspend a project, based on strategy analysis according to the BABOK model. However, after a systematic review, we observed it remains ignored in the academic literature.

The Strategy Analysis knowledge area proposed in the BABOK model describes the business analysis work that must be performed to identify the business need, enable the enterprise to address that need and align the resulting strategy for the change with higher and lower-level strategies. This alignment is performed with the following activities: analyzing the current state, defining the future state, assessing risks and defining the change strategy.

(Berghout& Tan, 2013) emphasize the need to use the business case before implementing the IT project. The proposed theoretical model indicates the following constituents for generating the business case that works as a kill gate to define the project continuation or not: organizational constituents are business cost objectives, benefits appraisal, consolidation, technological components (technological requirements and supplier options) and project components (project planning and governance, cost estimates, risk assessment, stakeholders).

3. RESEARCH METHOD

We conducted a systematic review of the literature to verify if the academy develops research related to the alignment proposed by BABOK, using the process proposed by (Brereton e al, 2007). We used the Web of Science platform to carry out the bibliometric research in October 2018, with the search queries detailed in Table 1. Our premise is that the “attention” given by the literature could be reflected by the number of resulting papers. First, we sought papers related to the business context. Next, we introduced the intersection with Requirements. Then, we introduced the intersection with IT, information systems and software development. The final step is to introduce “BABOK”.

Table 1: Bibliometric Analysis

		ARTICLES AND REVIEW	
Line	**Query**	**Search Query**	**Number of Articles**
1	1	(“business analysis” OR “strategy analysis” OR “business requirements”)	2069
2	2 AND 1	(“requirement elicitation” OR “requirement engineering” OR “requirement analysis”)	12
3	3 AND 2 AND 1	(“software development” OR “software process”)	3
4	4 AND 3 AND 2 And 1	(“Information technology” OR “Information system” or “software development”)	3
5	Babok AND 4	BABOK	1

Source: Authors.

The queries performed are defined in the column “Query” that combines the lines that contain the logic OR with keywords.

4. DISCUSSIONS

Our bibliometric results showed only 12 papers that mention the Business context within the Requirements aspects, which contradicts the premise that poor understanding of requirements (Baruah, 2015) is one of the most important causes for IT projects failure.

The number of papers found reduces to 3 and then to just one with the addition of software development and, then, BABOK. It can be an evidence that the literature is little concerned with an integrated approach between business issues and IT issues for developing software. In particular, alignment, as described in the BABOK model, is ignored despite its importance and widespread use by companies.

CONCLUSIONS

The requirements engineering approach is superficial when observing the alignment with business issues, especially in the strategic approach. Thus, we identify a research opportunity regarding the alignment between IT and the business following the line of thought proposed by BABOK in the strategic area of expertise.

We therefore, believe this gap in the academic literature could be bridged with research in this regard since it is a relevant topic for efficiently aligning IT projects and business strategy.

REFERENCES

1. Baruah, Nomi. (2015),Requirement Management in Agile Software Environment. Procedia Computer Sciencepp.62 81 – 83
2. Berghout, Egon, Tan, Chee-Wee.(2013) Understanding the impact of business cases on IT investment decisions: An analysis of municipal e-government projects, Information & Management pp. 50 489–506
3. Brereton, Pearl, Kitchenham, Barbara A. Budgen, David,(2007) Lessons from applying the systematic literature review process within the software engineering domain, The Journal of Systems and Software pp. 80 (2007) 571–583.

4. Bjarnason, Elizabeth, Unterkalmsteiner, Michael, Borg, Markus, Engström, Emelie. (2016) Information and Software Technology pp.77, 61–79.
5. Doumi, K., Baïna, S., &Baïna, (2013) K. Strategic business and IT alignment: Representation and evaluation. Journal of Theoretical and Applied Information Technology, pp.47(1), 41–52.
6. IIBA - International Institute of Business Analysis. BABOK (2015)- A Guide to the Business Analysis Body of Knowledge. version 3.
7. J. S. Reel. Critical success factors in software projects.(1999),*IEEE Software*, vol. 16, no. 3, pp. 18-23, May/Jun
8. Jorfi, S., & Jorfi, H. (2011) Strategic operations management: Investigating the factors impacting IT-business strategic alignment. In Procedia - Social and Behavioral Sciences (Vol. 24, pp. 1606–1614). http://doi.org/10.1016/j.sbspro.2011.09.002.
9. Larson, Elizateth; Richard Larson (2005). Gathering Requirements: Go Away Please!, 2005 PMI Global Congress Proceedings.
10. Charette, R. N. (2005) Why software fails. *IEEE Spectrum*, vol. 42, no. 9, pp. 42-49, Sept.