

Paradigma železnega trikotnika

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Povzetek

Raziskovalno vprašanje (RV): Železni trikotnik, imenovan tudi trojna omejitvev, projektni trikotnik, zlati trikotnik in agilni trikotnik, je osrednji koncept raziskav in prakse projektnega menedžmenta, ki predstavlja razmerje med ključnimi merili uspešnosti. Vendar pa obstaja nesoglasje o tem, katera merila naj bodo predstavljena na ogliščih tega trikotnika. Namen tega prispevka je raziskati, kateri koncepti so del železnega trikotnika in kako so se ti koncepti skozi čas spreminjali.

Namen: Naš namen je opraviti sistematičen pregled znanstvenih člankov, ki obravnavajo tematiko železnega trikotnika in njegove elemente (čas, stroški in obseg). Dokazati želimo, da obstaja teoretična praznina v klasični teoriji železnega trikotnika ter da se elementi železnega trikotnika nenazadnje odražajo v uspešnem menedžiranju projektov.

Metoda: Sistematičen pregled znanstvene literature bo izveden po javno dostopnih bazah podatkov, in sicer smo kot iskalne pojme uporabili »železni trikotnik«, »trojna omejitvev«, »uspešnost projekta« in »dejavniki uspeha«. Znanstvene članke in doktorske/magistrske disertacije smo poiskali v bazah Academia.edu, ProQuest, ScienceDirect, Elsevier in Google Scholar. Izločili smo literaturo, ki se neposredno ne nanaša na področje raziskovanja.

Rezultati: Ugotovili smo, da obstaja v osnovni teoriji železnega trikotnika praznina oz. zmeda glede pozicioniranja kakovosti in obsega projekta v železnem trikotniku. Želimo torej zmanjšati vrzel in potrditi tezo, da kakovost ni eden od 3 elementov železnega trikotnika, ampak je posredno definirana skozi elemente železnega trikotnika (čas, stroški, obseg). Avtorji do sedaj izvedenih raziskav so navedli elemente železnega trikotnika in po skupinah definirali merila uspešnosti projektov, med katere so uvrstili posamezne elemente železnega trikotnika. Pričakujemo, da bomo potrdili hipotezo, da obstaja povezava med elementi železnega trikotnika in uspešnostjo projektov.

Organizacija: Naša raziskava bo potrdila razsežnost koncepta železnega trikotnika in pokazala vpliv njegovih elementov na najpogostejše skupine meril uspešnosti, s pomočjo katerih družbe merijo uspešnost projektov. Ta raziskava bo pokazala, katerim elementom železnega trikotnika in meril, pripisuje znanstvena literatura večji pomen, kar predstavlja izhodišče za optimizacijo na področju menedžiranja različnih vrst projektov.

Družba: Razumevanje koncepta železnega trikotnika in njegove vloge pri oblikovanju meril uspešnosti bo pripomoglo, da bodo različni deležniki, ki so vpeti v menedžiranje projektov, bolj motivirani za spremljanje elementov železnega trikotnika in da jim bo to omogočalo bolj učinkovito menedžiranje, kar posledično vpliva tudi na njihovo zavzetost pri opravljanju projektnih zadolžitvev.

Originalnost: Obravnava te tematike bo prispevala k odpravi ali vsaj zmanjšanju zaznane teoretične raziskovalne vrzeli oz. zmede glede pozicioniranja elementov železnega trikotnika ter povezave teh elementov na uspešnost projektov.

Omejitve/nadaljnje raziskovanje: Obravnavana tematika je dobro preučevana zadnjih 20 let, čeprav se je teoretično zelo preoblikovala. Istočasno opažamo, da teoretični obravnavi ne sledijo znanstvene raziskave, saj le-te pokrivajo predvsem področje metodologije, faktorjev in strategij uspešnosti projektnega menedžmenta v gradbeništvu oz. na velikih investicijskih projektih, področju IT in zdravstvene dejavnosti.

Predlogi za nadaljnje raziskovanje bodo podani v smeri, da se raziskava te tematike izvede v drugih panogah in drugih vrstah projektov ter na več različnih deležnikih in/ali deležniških skupinah, ki so vpete v menedžiranje projektov.

Ključne besede: projektni menedžment, železni trikotnik, trojna omejitvev, projektni trikotnik, agilni trikotnik, uspešnost projekta, dejavniki uspeha

Mag. Mateja Burgar Makovec je diplomirala na Ekonomski fakulteti leta 2000 na smeri Management in organizacija. Leta 2005 je na Ekonomski fakulteti pridobila znanstveni magistrski naslov iz mednarodne ekonomije. Magistrsko delo je pokrivalo področje uvajanja projektnega načina dela in projektne pisarne v avtomobilski industriji. Do sedaj ima objavljena 2 strokovna prispevka v Projektni mreži Slovenije. Več kot 20-letne izkušnje na področju projektnega menedžmenta si je pridobila v Trimu Trebnje, v projektne pisarni TPV d.d., zadnjih 10 let pa v nabavi Nuklearne elektrarne Krško. Kot doktorandka študijskega programa Menedžment kakovosti na Fakulteti za organizacijske študije v Novem mestu raziskovalni fokus nadaljuje na področju projektnega menedžmenta ter se osredotoča na elemente projektnega trikotnika ter njihovo vlogo pri oblikovanju KPI iz perspektive deležnikov na inženiring projektih v jedrski industriji.

The Paradigm of the Iron Triangle

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Abstract

Research Question (RQ): The iron triangle, also named as the triple constraint, project triangle, golden triangle, and agile triangle, is a central concept in project management research and practice that represents the relationship between key performance measures. However, there is disagreement about which criteria should be represented at the vertices of this triangle. The purpose of this paper is to explore which concepts are part of the iron triangle and how these concepts have changed over time.

Purpose: Our purpose is to conduct a systematic review of scientific articles dealing with the topic of the iron triangle and its elements (time, cost and scope). We want to demonstrate that there is a theoretical gap in the classical theory of the iron triangle and that the elements of the iron triangle are ultimately reflected in successful project management.

Method: A systematic review of the scientific literature will be conducted using publicly available databases, namely "iron triangle", "triple constraint", "project performance" and "success factors" as search terms. Scientific articles and doctoral/master's theses were searched in the databases Academia.edu, ProQuest, ScienceDirect, Elsevier and Google Scholar. We excluded literature that does not directly relate to the field of research.

Results: We found out that there is a gap in the basic theory of the iron triangle or to be more exact confusion about the positioning of quality and scope of the project in the iron triangle. We therefore want to reduce the gap and confirm the thesis that quality is not one of the 3 elements of the iron triangle, but is indirectly defined through the elements of the iron triangle (time, cost, scope). The authors of the research carried out so far listed the elements of the iron triangle and defined success criteria of the projects by group, among which the individual elements of the iron triangle were classified. We expect to confirm the hypothesis that there is a connection between the elements of the iron triangle and success of projects.

Organization: Our research will confirm the dimensions of the iron triangle concept and show the influence of its elements on the most common groups of success criteria, with the help of which companies measure the success of projects. This research will show which elements of the iron triangle and criteria are given greater importance by the scientific literature, which represents a starting point for optimization in the field of managing various types of projects.

Society: Understanding the concept of the iron triangle and its role in the creation of success criteria will help the various stakeholders involved in project management to be more motivated to monitor the elements of the iron triangle and that this will allow them to manage more effectively, which in turn also affects their commitment in performing project duties.

Originality: Addressing this topic will contribute to eliminating or at least reducing the perceived theoretical research gap, or confusion regarding the positioning of the elements of the iron triangle and the connection of these elements to the success of projects.

Limitations / further research: The topic under discussion has been well studied for the past 20 years, although it has undergone a great deal of theoretical transformation. At the same time, we note that the theoretical treatment is not followed by scientific research, as it mainly covers the field of methodology, factors and strategies for the success of project management in the construction industry or on large investment projects, in the field of IT and healthcare.

Proposals for further research will be made in order to conduct research on this topic in other industries and on other types of projects and on several different stakeholders and/or stakeholder groups involved in project management.

Keywords: project management, iron triangle, triple constraint, project triangle, agile triangle, project performance, success factors

MSc. Mateja Burgar Makovec graduated from the Faculty of Economics in 2000, majoring in Management and Organization. In 2005, she obtained a scientific Master's degree in International Economics at the Faculty of Economics. The master's thesis covered the deployment of the project management and the project office in the automotive industry. So far, she has published 2 professional articles in the Project Network of Slovenia. She gained more than 20 years of experience in the field of project management in Trimo Trebnje, in the project office at TPV d.d., and the last 10 years in the procurement department of Nuclear Power Plant in Krško. As a doctoral student of Quality Management at the Faculty of Organization Studies in Novo mesto, she continues her research focus in the field of project management and focuses on the elements of the project triangle and their role in the creation of KPIs from the perspective of stakeholders in engineering projects in the nuclear industry.
