

[Journals \(https://www.mdpi.com/about/journals/\)](https://www.mdpi.com/about/journals/)[Topics \(https://www.mdpi.com/topics/\)](https://www.mdpi.com/topics/)[Information \(https://www.mdpi.com/guidelines/\)](https://www.mdpi.com/guidelines/)[Author Services \(https://www.mdpi.com/authors/english/\)](https://www.mdpi.com/authors/english/)[Initiatives](#)[About \(https://www.mdpi.com/about/\)](https://www.mdpi.com/about/)

### ▼ User Menu

<a href="/user/myprofile">Home (/user/myprofile)</a>	Journal	Sustainability (https://www.mdpi.com/journal/sustainability) (ISSN 2071-1050)
<a href="/user/manage_accounts">Manage Accounts (/user/manage_accounts)</a>	Manuscript ID	sustainability-700407
<a href="/user/chgpwd">Change Password (/user/chgpwd)</a>	Type	Article
<a href="/user/edit">Edit Profile (/user/edit)</a>	Title	Use of the Value Chain in the Process of Generating a Sustainable Business Strategy on the Example of Manufacturing and Industrial Enterprises in the Czech Republic (https://www.mdpi.com/2071-1050/12/4/1520)
<a href="/user/logout">Logout (/user/logout)</a>	Authors	Jarmila Straková * , Ismi Rajiani * , Petra Pártlová * , Jan Váchal * , Ján Dobrovič *
	Special Issue	Social and New Technology Challenges of Sustainable Business (https://www.mdpi.com/journal/sustainability/special_issues/Technology_Challenges_Sustainable_Business)

### ▼ Submissions Menu

<a href="/user/manuscripts/upload">Submit Manuscript (/user/manuscripts/upload)</a>	Abstract	The paper presents a method of generating a business strategy using value chain analysis. There were 186 manufacturing and industrial enterprises from the Czech Republic. The analysis was carried out using mathematical-statistical methods (dimensional reduction, logit regression and its transformation in order to objectify the opinion level of the managers) and neural network in terms of validation of the results of the mathematical-statistical methods. The aim was to determine the significance of different parts of the value chain in terms of their impact on the profitability of an enterprise and to demonstrate its important role in the process of generating business strategy. The significance for the profitability of the enterprises was statistically proven in the area of scientific and technological development, input logistics and human resources management. These parts were identified by the authors as the golden triangle of manufacturing and industry. Purchasing and output logistics were identified as the parts with a negative impact to the profitability of the enterprises. Strong underestimation of scientific and technological development by the top managers of the manufacturing and industrial enterprises is seen as a very negative finding. Neural networks showed higher statistical sensitivity compared to the mathematical-statistical methods (dimensional reduction and logit regression); they defined the value sector chain with the following structure (ranked from the highest degree of positive impact on the profitability of the enterprise): human resources management, scientific and technological development, production, input logistics, purchasing, material management, output logistics, enterprise infrastructure, marketing and sales, service and other supporting services. In conclusion, it is stated that the sector value chain of manufacturing and industrial enterprises will be further decomposed into value chain models of specific branches of the production and industry, such as engineering, construction etc., intended for direct use in different business entities to generate their unique value chains, and corporate strategies.
<a href="/user/manuscripts/status">Display Submitted Manuscripts (/user/manuscripts/status)</a>		
<a href="/user/manuscripts/co-authored">Display Co-Authored Manuscripts (/user/manuscripts/co-authored)</a>		
<a href="/user/pre_english_article/status">English Editing (/user/pre_english_article/status)</a>		
<a href="/user/discount_voucher">Discount Vouchers (/user/discount_voucher)</a>		
<a href="/user/invoices">Invoices (/user/invoices)</a>		
<a href="/user/get/latex_word_count">LaTeX Word Count (/user/get/latex_word_count)</a>		

### ▼ Reviewers Menu



## Authors' Responses to Reviewer's Comments (Reviewer 1)

Author's Notes Dear Reviewers,

We would like to thank you for your time and affords. We are sure that your suggestions help us a lot to improve our paper quality.

We did our best to satisfy your requirements. All improvements are marked in red.

Thank you once again.

Authors

### Reviewer 1

According to the first reviewer the comments were modified:

separation of the introduction from the literature review (the motivation for writing the article and the importance of the topic were explained

- new current literary sources were added,
- the methodology for logit regression was added (individual variables were explained),
- interpretation of the results was extended,

discussion and conclusion were significantly modified.

"Please see the attachment."

Author's Notes Report Notes (/user/review/displayFile/10836595/Q8zj12qE?  
File file=author-coverletter&report=6198422)

## Review Report Form

- Quality of English Language
- English very difficult to understand/incomprehensible
  - Extensive editing of English language and style required
  - Moderate English changes required
  - English language and style are fine/minor spell check required
  - I am not qualified to assess the quality of English in this paper

Yes Can be improved Must be improved Not applicable



Is the content succinctly described and contextualized with respect to previous and present theoretical background and empirical research (if applicable) on the topic?	( )	( )	(x)	( )
Are the research design, questions, hypotheses and methods clearly stated?	(x)	( )	( )	( )
Are the arguments and discussion of findings coherent, balanced and compelling?	( )	(x)	( )	( )
For empirical research, are the results clearly presented?	( )	(x)	( )	( )
Is the article adequately referenced?	( )	( )	( )	( )
Are the conclusions thoroughly supported by the results presented in the article or referenced in secondary literature?	( )	( )	(x)	( )

Comments  
and  
Suggestions  
for Authors

This paper presents a method of generating a business strategy using value chain analysis. The aim of the study is to determine the significance of different parts of the value chain in terms of their impact on the profitability of an enterprise and to demonstrate its important role in the process of generating business strategy.

This paper leads to interesting discoveries, however, it requires several revisions before being ready for publication.

The authors should improve the Introduction Section greatly, to state the motivation of their study clearly, tell readers why their study is important and state their contribution to the literature clearly. The authors should make a new literature review section to state more related literature and recent literature related to their work. References are too old and need to be updated to show the currency of the topic. The authors should get a new theory section to tell readers all the theory support for the Generalized Linear Model and Transformation model. The data section is too brief. They should tell readers clearly about the data, data collection process and what variables to be used. The discussion and conclusion sections are too brief and are not rooted in the theory.

Submission Date 04 January 2020

Date of this review 17 Jan 2020 01:30:25

### ▼ User Menu

Home (/user/myprofile)	Journal	Sustainability (https://www.mdpi.com/journal/sustainability) (ISSN 2071-1050)
Manage Accounts (/user/manage_accounts)	Manuscript ID	sustainability-700407
Change Password (/user/chgpwd)	Type	Article
Edit Profile (/user/edit)	Title	Use of the Value Chain in the Process of Generating a Sustainable Business Strategy on the Example of Manufacturing and Industrial Enterprises in the Czech Republic (https://www.mdpi.com/2071-1050/12/4/1520)
Logout (/user/logout)	Authors	Jarmila Straková * , Ismi Rajiani * , Petra Pártlová * , Jan Váchal * , Ján Dobrovič *
	Special Issue	Social and New Technology Challenges of Sustainable Business (https://www.mdpi.com/journal/sustainability/special_issues/Technology_Challenges_Sustainable_Business)

### ▼ Submissions Menu

Submit Manuscript (/user/manuscripts/upload)	Abstract	The paper presents a method of generating a business strategy using value chain analysis. There were 186 manufacturing and industrial enterprises from the Czech Republic. The analysis was carried out using mathematical-statistical methods (dimensional reduction, logit regression and its transformation in order to objectify the opinion level of the managers) and neural network in terms of validation of the results of the mathematical-statistical methods. The aim was to determine the significance of different parts of the value chain in terms of their impact on the profitability of an enterprise and to demonstrate its important role in the process of generating business strategy. The significance for the profitability of the enterprises was statistically proven in the area of scientific and technological development, input logistics and human resources management. These parts were identified by the authors as the golden triangle of manufacturing and industry. Purchasing and output logistics were identified as the parts with a negative impact to the profitability of the enterprises. Strong underestimation of scientific and technological development by the top managers of the manufacturing and industrial enterprises is seen as a very negative finding. Neural networks showed higher statistical sensitivity compared to the mathematical-statistical methods (dimensional reduction and logit regression); they defined the value sector chain with the following structure (ranked from the highest degree of positive impact on the profitability of the enterprise): human resources management, scientific and technological development, production, input logistics, purchasing, material management, output logistics, enterprise infrastructure, marketing and sales, service and other supporting services. In conclusion, it is stated that the sector value chain of manufacturing and industrial enterprises will be further decomposed into value chain models of specific branches of the production and industry, such as engineering, construction etc., intended for direct use in different business entities to generate their unique value chains, and corporate strategies.
Display Submitted Manuscripts (/user/manuscripts/status)		
Display Co-Authored Manuscripts (/user/manuscripts/co-authored)		
English Editing (/user/pre_english_article/status)		
Discount Vouchers (/user/discount_voucher)		
Invoices (/user/invoices)		
LaTeX Word Count (/user/get/latex_word_count)		

### ▼ Reviewers Menu



## Authors' Responses to Reviewer's Comments (Reviewer 2)

Author's Notes Dear Reviewer,

We would like to thank you for your time and affords. We are sure that your suggestions help us a lot to improve our paper quality.

We did our best to satisfy your requirements. All improvements are marked in red.

Thank you once again.

Authors.

According to the second reviewer comments were modified:

separation of the introduction from the literature review (the motivation for writing the article and the importance of the topic were explained, hypotheses were modified, interpretation of the results was extended, recommendations were added the English language was corrected

"Please see the attachment."

Author's Notes Report Notes (/user/review/displayFile/10867878/wx8yqK5r?  
File file=author-coverletter&report=6221941)

## Review Report Form

- Quality of English Language
- English very difficult to understand/incomprehensible
  - Extensive editing of English language and style required
  - Moderate English changes required
  - English language and style are fine/minor spell check required
  - I am not qualified to assess the quality of English in this paper

Yes    Can be improved    Must be improved    Not applicable

Is the content succinctly described and contextualized with respect to previous and present theoretical background and empirical research (if applicable) on the topic?

Are the research design, questions, hypotheses and methods clearly stated?

Are the arguments and discussion of findings coherent, balanced and compelling?



For empirical research, are the results clearly presented? ( ) (x) ( ) ( )

Is the article adequately referenced? ( ) ( ) ( ) ( )

Are the conclusions thoroughly supported by the results presented in the article or referenced in secondary literature? ( ) (x) ( ) ( )

Comments  
and  
Suggestions  
for Authors

I have read this paper with great interest. It is well written using academic standards however as every paper it has some errors and made readers for greater discussion.

Introduction and literature review part should be divided on two separate sections. In Introduction the Authors should state motivation to the study and then propose Literature review.

In my opinion proposed hypotheses are too narrow – it should be elaborated more detailed scientific hypotheses (eg the H1 is not acceptable, authors should consider is it proper to study sector value chain ? is this term right based on the literature?). No hypotheses related to sustainability ?

In the methods Authors should give period of time for data collection

Authors should explain clearly all variables and their measures as well!

Data in the tables should be commented wider way

Authors should present more recommendations.

Submission Date 04 January 2020

Date of this review 18 Jan 2020 04:23:29

[Journals \(https://www.mdpi.com/about/journals/\)](https://www.mdpi.com/about/journals/)[Topics \(https://www.mdpi.com/topics/\)](https://www.mdpi.com/topics/)[Information \(https://www.mdpi.com/guidelines/\)](https://www.mdpi.com/guidelines/)[Author Services \(https://www.mdpi.com/authors/english/\)](https://www.mdpi.com/authors/english/)[Initiatives](#)[About \(https://www.mdpi.com/about/\)](https://www.mdpi.com/about/)

### ▼ User Menu

<a href="/user/myprofile">Home (/user/myprofile)</a>	Journal	Sustainability (https://www.mdpi.com/journal/sustainability) (ISSN 2071-1050)
<a href="/user/manage_accounts">Manage Accounts (/user/manage_accounts)</a>	Manuscript ID	sustainability-700407
<a href="/user/chgpwd">Change Password (/user/chgpwd)</a>	Type	Article
<a href="/user/edit">Edit Profile (/user/edit)</a>	Title	Use of the Value Chain in the Process of Generating a Sustainable Business Strategy on the Example of Manufacturing and Industrial Enterprises in the Czech Republic (https://www.mdpi.com/2071-1050/12/4/1520)
<a href="/user/logout">Logout (/user/logout)</a>	Authors	Jarmila Straková * , Ismi Rajiani * , Petra Pártlová * , Jan Váchal * , Ján Dobrovič *
	Special Issue	Social and New Technology Challenges of Sustainable Business (https://www.mdpi.com/journal/sustainability/special_issues/Technology_Challenges_Sustainable_Business)

### ▼ Submissions Menu

<a href="/user/manuscripts/upload">Submit Manuscript (/user/manuscripts/upload)</a>	Abstract	<p>The paper presents a method of generating a business strategy using value chain analysis. There were 186 manufacturing and industrial enterprises from the Czech Republic. The analysis was carried out using mathematical-statistical methods (dimensional reduction, logit regression and its transformation in order to objectify the opinion level of the managers) and neural network in terms of validation of the results of the mathematical-statistical methods. The aim was to determine the significance of different parts of the value chain in terms of their impact on the profitability of an enterprise and to demonstrate its important role in the process of generating business strategy. The significance for the profitability of the enterprises was statistically proven in the area of scientific and technological development, input logistics and human resources management. These parts were identified by the authors as the golden triangle of manufacturing and industry. Purchasing and output logistics were identified as the parts with a negative impact to the profitability of the enterprises. Strong underestimation of scientific and technological development by the top managers of the manufacturing and industrial enterprises is seen as a very negative finding. Neural networks showed higher statistical sensitivity compared to the mathematical-statistical methods (dimensional reduction and logit regression); they defined the value sector chain with the following structure (ranked from the highest degree of positive impact on the profitability of the enterprise): human resources management, scientific and technological development, production, input logistics, purchasing, material management, output logistics, enterprise infrastructure, marketing and sales, service and other supporting services. In conclusion, it is stated that the sector value chain of manufacturing and industrial enterprises will be further decomposed into value chain models of specific branches of the production and industry, such as engineering, construction etc., intended for direct use in different business entities to generate their unique value chains, and corporate strategies.</p>
<a href="/user/manuscripts/status">Display Submitted Manuscripts (/user/manuscripts/status)</a>		
<a href="/user/manuscripts/co-authored">Display Co-Authored Manuscripts (/user/manuscripts/co-authored)</a>		
<a href="/user/pre_english_article/status">English Editing (/user/pre_english_article/status)</a>		
<a href="/user/discount_voucher">Discount Vouchers (/user/discount_voucher)</a>		
<a href="/user/invoices">Invoices (/user/invoices)</a>		
<a href="/user/get/latex_word_count">LaTeX Word Count (/user/get/latex_word_count)</a>		

### ▼ Reviewers Menu



### Authors' Responses to Reviewer's Comments (Reviewer 3)

Author's Notes Dear Reviewer,

We would like to thank you for your time and affords. We are sure that your suggestions help us a lot to improve our paper quality.

We did our best to satisfy your requirements. All improvements are marked in red.

Thank you once again.

Authors

- the literary review was supplemented and updated as recommended
- the methodology for logit regression was added (individual variables were explained),
- interpretation of the results was extended,
- discussion and conclusion were significantly modified.

"Please see the attachment."

Author's Notes Report Notes (/user/review/displayFile/10873760/O7XjRfYA?  
File file=author-coverletter&report=6226930)

### Review Report Form

- Quality of English Language
- English very difficult to understand/incomprehensible
  - Extensive editing of English language and style required
  - Moderate English changes required
  - English language and style are fine/minor spell check required
  - I am not qualified to assess the quality of English in this paper

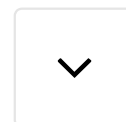
Yes Can be improved Must be improved Not applicable

Is the content succinctly described and contextualized with respect to previous and present theoretical background and empirical research (if applicable) on the topic?

(x) ( ) ( ) ( )

Are the research design, questions, hypotheses and methods clearly stated?

( ) (x) ( ) ( )



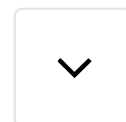


- Are the arguments and discussion of findings coherent, balanced and compelling? ( ) (x) ( ) ( )
- For empirical research, are the results clearly presented? (x) ( ) ( ) ( )
- Is the article adequately referenced? ( ) ( ) ( ) ( )
- Are the conclusions thoroughly supported by the results presented in the article or referenced in secondary literature? (x) ( ) ( ) ( )

Comments and Suggestions for Authors please check the comments in the attached document  
 peer-review-6226930.v2.pdf  
 (/user/review/displayFile/10873760/O7XjRfYA?file=review&report=6226930)

Submission Date 04 January 2020

Date of this review 17 Jan 2020 22:49:28



[Journals \(https://www.mdpi.com/about/journals/\)](https://www.mdpi.com/about/journals/)[Topics \(https://www.mdpi.com/topics/\)](https://www.mdpi.com/topics/)[Information \(https://www.mdpi.com/guidelines/\)](https://www.mdpi.com/guidelines/)[Author Services \(https://www.mdpi.com/authors/english/\)](https://www.mdpi.com/authors/english/)[Initiatives](#)[About \(https://www.mdpi.com/about/\)](https://www.mdpi.com/about/)

### ▼ User Menu

<a href="/user/myprofile">Home (/user/myprofile)</a>	Journal	Sustainability (https://www.mdpi.com/journal/sustainability) (ISSN 2071-1050)
<a href="/user/manage_accounts">Manage Accounts (/user/manage_accounts)</a>	Manuscript ID	sustainability-700407
<a href="/user/chgpwd">Change Password (/user/chgpwd)</a>	Type	Article
<a href="/user/edit">Edit Profile (/user/edit)</a>	Title	Use of the Value Chain in the Process of Generating a Sustainable Business Strategy on the Example of Manufacturing and Industrial Enterprises in the Czech Republic (https://www.mdpi.com/2071-1050/12/4/1520)
<a href="/user/logout">Logout (/user/logout)</a>	Authors	Jarmila Straková * , Ismi Rajiani * , Petra Pártlová * , Jan Váchal * , Ján Dobrovič *
	Special Issue	Social and New Technology Challenges of Sustainable Business (https://www.mdpi.com/journal/sustainability/special_issues/Technology_Challenges_Sustainable_Business)

### ▼ Submissions Menu

<a href="/user/manuscripts/upload">Submit Manuscript (/user/manuscripts/upload)</a>	Abstract	The paper presents a method of generating a business strategy using value chain analysis. There were 186 manufacturing and industrial enterprises from the Czech Republic. The analysis was carried out using mathematical-statistical methods (dimensional reduction, logit regression and its transformation in order to objectify the opinion level of the managers) and neural network in terms of validation of the results of the mathematical-statistical methods. The aim was to determine the significance of different parts of the value chain in terms of their impact on the profitability of an enterprise and to demonstrate its important role in the process of generating business strategy. The significance for the profitability of the enterprises was statistically proven in the area of scientific and technological development, input logistics and human resources management. These parts were identified by the authors as the golden triangle of manufacturing and industry. Purchasing and output logistics were identified as the parts with a negative impact to the profitability of the enterprises. Strong underestimation of scientific and technological development by the top managers of the manufacturing and industrial enterprises is seen as a very negative finding. Neural networks showed higher statistical sensitivity compared to the mathematical-statistical methods (dimensional reduction and logit regression); they defined the value sector chain with the following structure (ranked from the highest degree of positive impact on the profitability of the enterprise): human resources management, scientific and technological development, production, input logistics, purchasing, material management, output logistics, enterprise infrastructure, marketing and sales, service and other supporting services. In conclusion, it is stated that the sector value chain of manufacturing and industrial enterprises will be further decomposed into value chain models of specific branches of the production and industry, such as engineering, construction etc., intended for direct use in different business entities to generate their unique value chains, and corporate strategies.
<a href="/user/manuscripts/status">Display Submitted Manuscripts (/user/manuscripts/status)</a>		
<a href="/user/manuscripts/co-authored">Display Co-Authored Manuscripts (/user/manuscripts/co-authored)</a>		
<a href="/user/pre_english_article/status">English Editing (/user/pre_english_article/status)</a>		
<a href="/user/discount_voucher">Discount Vouchers (/user/discount_voucher)</a>		
<a href="/user/invoices">Invoices (/user/invoices)</a>		
<a href="/user/get/latex_word_count">LaTeX Word Count (/user/get/latex_word_count)</a>		

### ▼ Reviewers Menu



Volunteer Preferences (/volunteer\_reviewer\_info/view) Quality of English Language ( ) English very difficult to understand/incomprehensible ( ) Extensive editing of English language and style required ( ) Moderate English changes required (x) English language and style are fine/minor spell check required ( ) I am not qualified to assess the quality of English in this paper

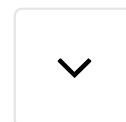
Recruiting Reviewers (/reviewer/list/recruiting\_reviewers\_manuscripts)

	Yes	Can be improved	Must be improved	Not applicable
Is the content succinctly described and contextualized with respect to previous and present theoretical background and empirical research (if applicable) on the topic?	(x)	( )	( )	( )
Are the research design, questions, hypotheses and methods clearly stated?	(x)	( )	( )	( )
Are the arguments and discussion of findings coherent, balanced and compelling?	(x)	( )	( )	( )
For empirical research, are the results clearly presented?	(x)	( )	( )	( )
Is the article adequately referenced?	( )	( )	( )	( )
Are the conclusions thoroughly supported by the results presented in the article or referenced in secondary literature?	(x)	( )	( )	( )

Comments and Suggestions for Authors The paper has been improved and seems to meet the standards of the journal and the readership.

Submission Date 04 January 2020

Date of this review 11 Feb 2020 01:31:04





*sustainability*

an Open Access Journal by MDPI



# CERTIFICATE OF PUBLICATION



Certificate of publication for the article titled:

Use of the Value Chain in the Process of Generating a Sustainable Business Strategy on the Example of Manufacturing and Industrial Enterprises in the Czech Republic

Authored by:

Jarmila Straková; Ismi Rajiani; Petra Pártlová; Jan Váchal; Ján Dobrovič

Published in:

*Sustainability* 2020, Volume 12, Issue 4, 1520



Academic Open Access Publishing  
since 1996

Basel, May 2023