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## **Internationalisation Strategies of German VET Providers. What is Important for Business Models in New Markets?**

**Kühn, Ida Kristina**

University of Bremen, Institute Technology and Education (ITB), [kristina.kuehn@uni-bremen.de](mailto:kristina.kuehn@uni-bremen.de)

**Peters, Susanne**

University of Bremen, Institute Technology and Education (ITB), [speters@uni-bremen.de](mailto:speters@uni-bremen.de)

**Holle, Larissa**

University of Bremen, Institute Technology and Education (ITB), [lholler@uni-bremen.de](mailto:lholler@uni-bremen.de)

### **Abstract**

The German Federal Ministry of Education and Research (BMBF) funds projects of commercial and non-profit Vocational Education and Training (VET) providers in order to transfer VET services by developing business models in an international context. For a former funding line, research has identified factors that support the transfer of VET services. Our contribution analyses the relevance of those factors for a current BMBF-funding line and is empirically based on an online survey among currently funded projects. Our main finding is that formerly identified success factors are still relevant in the context of the new funding line. Furthermore, our results underscore the outstanding importance of communication and customer integration in the context of internationalisation.

### **Keywords**

internationalisation strategy; business model development; transfer of VET

## **1 Introduction**

The dual principle within initial and further VET is considered a success factor for economic and social developments in Germany, but also at the international level (Hilbig, 2019a). In order to make this principle more viable internationally, the BMBF has created funding lines directed at the transfer of dual vocational training to different target countries. In the current funding line “Internationalisation of Vocational Education and Training (IBB)”, projects develop business models to transfer VET-services to target countries and each project attempts to adapt its service to the specific context of the targeted country.

Although the question concerning the transferability of training systems is currently of great relevance (Wiemann et al., 2019), a direct transfer of the German vocational training system appears difficult (Wolf, 2017). The same applies to the transferability of individual services in



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this context (Posselt et al., 2019), which makes a market-specific adaptation of different elements to be transferred even more important (Wiemann et al., 2019).

Following Hilbig (2019b), one option to transform national towards international business models is project-driven. Like any other organisation, the internationalisation of a service provider requires the consideration of internationalisation activities in the business model (Hilbig, 2019a). In addition to the planning of internationalisation activities, internationalisation requires a major capital and management effort in the home and target countries (Kutschker & Schmidt, 2011; Hilbig, 2019b). This seems rather difficult to implement against the background of a state funding line considering the limitations of project organisations (cf. ISO 21500). With regard to internationalisation, the chosen strategy for market entry is of particular importance (Hilbig, 2019b). In researching the previous funding line “Export of Vocational Education and Training (BEX)” (duration 2010-2017), the Fraunhofer Center for Central and Eastern Europe (MOEZ) identified drivers for, and obstacles to, the export of vocational education and training, based on interviews with the actors of the funded BEX projects (Fraunhofer MOEZ, 2012). Among those factors were drivers such as high appreciation of “Quality made in Germany” or political support in Germany and abroad. Examples for obstacles are missing acceptance of VET in the project country or communication barriers at the target market. Our study aims to answer the following research questions: (1) Are the drivers and obstacles towards the international transfer of VET as identified in the MOEZ-study valid for the IBB context as well? (2) If yes, to what extent do the actors of the actual funding line IBB perceive the factors identified by the MOEZ fostering or hindering?

## 2 Theoretical frame

The findings of the MOEZ study relate to the BEX funding line that aimed to deliver transferable business models for the context of different target countries. The successor funding line IBB also supports the transfer of VET services, based on the development of business models and with a focus on building up educational cooperation agreements. Therefore, the identified drivers and obstacles identified by the MOEZ should also be relevant in this context. Drivers are described as:

- a high appreciation of “quality made in Germany” in each project’s target country (D1) and worldwide presence and appreciation of German industry and products (D2) as important market forces;
- modularisation of VET services (D3), practical demonstration of (initial) education content (D4) and the certification of educational achievements (D5) allow for the adaption of educational services in new markets and create customer proximity;
- political marketing at higher level (D6), flanking of political actors (D7) and cross-sectoral cooperation and uniformity (D8) are considered important factors for dissemination and, therefore, for the sustainability of the educational service;
- the linking of technology and education in export activities (D9), the collaborative approach within the projects (D10), solid partners in the project country (D11) and the involvement of major German firms (D12) were identified as relevant factors for fostering internal structure and strategic direction of the projects (MOEZ, 2012).

The obstacles mostly relate to industry forces and key trends (see Porter, 2013) and refer to:

- the missing acceptance of (initial) vocational education in the project country (O1), the incompatibility at a systemic level (O2) and communication barriers as well as cultural differences (O3) which in sum are general competition disadvantages (MOEZ, 2012);

- a lack of technical infrastructure in the project country (O4), limited scope to pricing due to local purchasing power (O5) and a relatively high distance to the target market (O6) stand as economic barriers;
- finally, legal insecurities and political barriers emanate from state dominance and bureaucracy in the education sector of project country (O7), legal uncertainties in the sustainable provision of the service (O8) and customs and visa regulations and their influences on the project (O9) (MOEZ, 2012).

Overall, those drivers and obstacles capture the environment of a developed business model to transfer services in vocational education and training. Considering that a business model needs to reflect the chosen strategic orientation to be effective in terms of implementation (Hilbig, 2019a) and for achieving sustainability, this study refers to both Osterwalder and Pigneur (2013) as well as Porter (2013). Although the MOEZ-study has already identified several relevant factors, our work aims to provide further empirical evidence for existing factors and to identify if there are more factors, related to the current funding line.

### 3 Method and sample

The first aim of this study is to empirically validate the MOEZ drivers and obstacles towards internationalisation within the current funding line (IBB). In a first step, we built a questionnaire by operationalising the MOEZ findings into 58 items<sup>1</sup>. The online survey addressed commercial and non-profit German VET service providers and developers that are financed within the IBB funding line. To gather more information about the involved enterprises, the questionnaire respected company-related information additionally (e.g. share of education services in total company turnover, addressed target groups in Germany and project country or addressed education sectors in Germany and project country). We initially sent out 37 requests and received 31 completed questionnaires (n=31), which is a small sample to give general conclusions about the drivers and obstacles towards internationalisation. Yet, considering the high response rate (84%), the sample qualifies to give a detailed insight about drivers and obstacles towards internationalisation for projects within the IBB funding line. In general, one member per company answered and in the majority of the cases, there were two completed questionnaires for each project.

The IBB-funded projects consist of at least two involved partners, representing vocational training providers, commercial enterprises or associations. In addition, each project has a so-called study partner who can hold different functions in the process. In this study, the participating commercial enterprises are the focus of interest. The participating commercial actors mainly represent small and medium enterprises (SMEs) that offer services in the initial and further VET.

Before we started the data analysis, we conducted some tests to match application requirements for the data analysis. As expected, a normal distribution ( $\chi^2$ ) was not given due to the rather small sample size. Within the next step, the internal consistency of the scales was determined while keeping the limitations of a small sample in mind (cf. Bortz & Lienert, 2008). To check if the questionnaire has sufficient internal consistency, we tested the value of Cronbach's  $\alpha$  in order to find out, whether the dimensions reflect the MOEZ-factors. The minimal value can vary between 0.5 and 0.95, according to author and research approach (Müller, 2007). Due to the small sample size, the threshold for internal consistency is set at  $\alpha \geq 0.6$  (Malhotra, 1999).

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<sup>1</sup> The major part of the items was designed as statements to be evaluated by the participants (scale level "1=totally disagree" to "6=totally agree"; available was also option "7=I cannot evaluate this item"). Some items required the selection of an option (e.g. yes/no). Open questions after each section allowed the specification of evaluation results.

This value was reached for five out of the eleven items that portray drivers, while four of them (D5 and D13\*) reach insufficient results. On the one hand, this was an expected result due to the mentioned limitation. On the other hand, it could also mean that factors would actually have to be included or excluded. Thus, before the dimensions were accepted or rejected, a factor analysis was carried out in the cases with unsatisfactory Cronbach's  $\alpha$ . Since the underlying items are based on the results of an empirical study, the aim of the survey was not to exclude information, but rather to identify gaps that require further development through research.

The drivers D2, D7, D9, D12 and D14\* "Integration of customers in the transfer process" are extracted single items scales. The internal consistencies for the items that portray obstacles show acceptable or sufficient values (O2, O5, O6, O7 and O9). The threshold for internal consistency was missed for O1, O3 and O8. In two cases (O5 and O8) a factor analyses resulted in the splitting of O5 into O5.1 "price-setting power is limited", O5.2 "Importance of profitability" and O5.3 "Adoption of product to market appears difficult". Moreover, O8 was split into O8.1 "Legal uncertainties in the sustainable provision of the service" and O8.2 "Legal uncertainties causing planning uncertainties" (single item scale). With this new set-up, we began our data analysis.

## 4 Analysis and results

To analyse whether or not the drivers and obstacles towards internationalisation observed by MOEZ can also be detected in our sample, we first present a descriptive analysis of the relevant items. Second, we describe the differences between companies with and without an available internationalisation strategy at project start. Third, we use the Kruskal-Wallis-test to compare the means of these two groups related to all confirmed drivers and obstacles variables in order to analyse the different perceptions of VET service providers. Finally, an explorative analysis of the factors shows correlations between the drivers and obstacles via a correlation-matrix, which yields insights into important research desiderata.

### 4.1 Relevant drivers: appreciation of vet and customer orientation

At first, we discuss the average outcomes of the survey regarding the drivers. The results suggest that the factors of the MOEZ-study apply to the current funding line to a certain extent. This congruence is especially clear for the area of market forces. The participants agree to a large extent with a high appreciation of "quality made in Germany" in the project country (D1, mean=5,36) and the perceived worldwide presence and appreciation of German industry and products (D2, mean=5,17) within our sample. The relevance to adapt educational services into new markets and creation of customer proximity is confirmed for the case of the need to modularise VET services (D3, mean= 5,17), like for a project on further education in mechatronics in Serbia, and can be also confirmed for the aspect to practically demonstrate (initial) education content (D4, mean=4,91). The relevance of the certification of educational achievements (D5, mean=3,81) appears to be somewhat less important to the former findings: Only single projects follow the approach to certify VET education services, for instance a geothermal energy project in Spain. A few projects receive political support (e.g. a green-tech VET project in Greece) but the majority does not or rather not (D6, mean =3,00; D7= 2,55; D8= 3,71). This result says nothing about the relevance of political support. It can only give information about a received or not received support. The linking of technology and education in export activities showed pronounced consent of the participants regarding the item "export of education" (D9, mean=5,62). They rather declined the other options "export of technology" and "export of complementary offer". Finally, the involvement of major German firms (D12, mean=3,43), as in one project in the automotive sector in Mexico, seems not to be given in most of the cases. The collaborative approach within the projects could not be validated as a scale. Two single item scales represent possible sub-dimensions that should be further developed. Overall, 32,3% of

the participants did not have any existing networks at the beginning of the project (D10) and 3,2% reported a local office at the project start (D11).

Additional to the MOEZ-results, two new drivers were identified, namely the “design of relationships in the project country” (D13, mean=5,77) and the “integration of customers in the transfer process” (D14, mean=5,34). The results suggest that the respondents consider corresponding activities to be very important, pointing to a high relevance for the internationalisation process. A possible explanation can be found in Saebi et al. (2017), who state that companies geared to market development are also more likely to adapt their business models than those geared to defending an existing market position (Saebi et al., 2017). The question of what the market actually demands has yet to be answered for these projects.

#### **4.2 Relevant obstacles: connectivity and profitability**

Sabei et al. (2017) show that business models are most likely to be adapted to the given challenges rather than to opportunities. Taking a look at the obstacles in the context of IBB, we can say that the acceptance of VET in the project country (O1, mean=4,37) as well as the (estimated) incompatibility of transfer product and target environment (O2, mean=4,10) are important factors for our respondents and, therefore, appear to be important for internationalisation activities. Another central factor is the lack of technical infrastructure (O4, mean= 5,56). For most of the expected obstacles, the results of the online survey suggest that they are potentially important for the transfer of VET, but have rather low relevance in our sample. Finally, the newly identified factor “importance of profitability”, which is valued by the participants as relevant (O5.2, mean=4,80; “rather agree” up to “agree”). This aspect will be revived in the discussion.

Summing up the results relating to obstacles we can say that the participants evaluate most of the MOEZ-factors as not too important obstacles with the exception of the factors connectivity and profitability.

#### **4.3 Explorative analysis of the drivers and obstacles**

Internationalisation strategies need actions to be implemented (Hilbig, 2019b). Those actions are based on assumptions about drivers and obstacles and, thus, meet them in a planned manner. With an existing internationalisation strategy, supporting factors are integrated and challenges are counteracted. It is imaginable that those projects, that had an internationalisation strategy from the start, face drivers and obstacles in a different way compared to those companies or VET providers without. A comparison between the cases “internationalisation strategy available (1)” and “internationalisation strategy not available (2)” provides starting points to analyse different initial conditions and resulting strategic actions during the transfer process. Overall, 26 participants answered the related item. Half of them (n=13) state to have an internationalisation strategy, while others have none or are currently developing it. Due to the small sample, a non-parametric mean value comparison for independent groups (Kruskal-Wallis-test) was conducted for the most important drivers and obstacles as reported by the participants: drivers 1,2,3,4,13,14 and obstacles 1,2,4,5.2.

There were no significant differences identified, resulting in H0: “There is no difference between the groups 1,2 related to the factor<sub>D,O</sub>” being accepted. A descriptive statistic of this item shows, that half of the participants (N=26) reported an existing internationalisation strategy. The other half, however, is rather drivers: seven report an internationalisation strategy under development, two did not answer. Only four report not having an internationalisation strategy.

An additional exploratory analysis of the factors, however, yielded some interesting insights that might lead to further research. Desiderata are presented in the discussion. Table 1 and 2 show selected results.

A strong correlation at a level of  $p=.001^{**}$  can be noted for the appreciation of quality “made in Germany” and the presence of German industry in the project countries. Another strong correlation, here, links quality and the practical demonstration of VET content.

Within our sample, a moderate negative correlation ( $p\leq 0.005^{*}$ ) between German companies abroad (as e.g. cooperation partners or customers) and the flanking by political actors is given. Opposed to this finding, there is a strong relation between political marketing and the perceived cross-departmental coordination of supportive associations or actors. The mean value itself suggests that those who do not use political marketing also do not notice a crossover coordination of relevant institutions in the funding context (German and international). If education cooperation agreements were targeted at a national level, this aspect would have to be deepened.

**Table 1**

*Correlation matrix of the internationalisation drivers*

	D2 Presence of German industry	D4 Practical content demonstration	D7 Flanking by political actors	D8 Cross-depart. coordination	D12 German companies abroad	D12 Associations of project country
D1 Quality appreciation	.789**	.542**			.425*	
D3 Modularisation			.400*			
D6 Political marketing				.734**		.406*
D12 German companies abroad			-.419*			
D13 Companies of project country				-.482*		

*Legend.* \*correlation significant at level .05 (2-tailed); \*\*correlation significant at level .01 (2-tailed)

There was no relation found between customer integration and the design of relationships e.g. with modularisation or network items. This was, however, an expected result due to the important role of customer integration in business model development (Fährnrich & Optiz, 2003).

Regarding the obstacles, a certain number of strong correlations were observed. Most of them related to communication and market aspects (cf. Table 2). Many respondents cited challenges with communication (O3) as well as distance to the target market (O6) and sustainable implementation (O8.1). Respecting the mean values, we can state that those actors, who rather do not experience communication problems, do not see such in terms of distance and implementation possibilities. A focus on this indicates that the enterprises actively avoid it to become a problem – meaning a target market-oriented planning in advance and, therefore, possibly indicating a developed internationalisation strategy.

Table 2 shows a medium negative correlation ( $p\leq 0.005^{*}$ ) between the lack of acceptance of VET (O1) and a limited pricing power (O5). Respecting the mean values, this can be read as the more the acceptance of VET in the project country is lacking the less the price-setting power is limited. This could indicate that the higher the lack of acceptance of VET appears the less pricing opportunities are perceived at the target market.

**Table 2***Correlation matrix of the internationalisation obstacles*

	O5 Pricing power limited	O6 Distance to target market	O8 Sustainable provision of the service	O82 Project planning	O9 Customs and visa regulations
O1 Lack of acceptance of VET	-.377*				
O3 Communication difficulties	.396*	.721**	.573**		.438**
O4 Lack of technical infrastructure				.559*	
O7 State dominance in education sector			.704**		.530**
O8.1 Legal uncertainties in the sustainable provision of the service					.511*

*Legend.* \*\*correlation (p) significant at level .05 (2-tailed); \*correlation (p) significant at level .01 (2-tailed)

## 5 Discussion

The research questions can be answered as follows: (1) the drivers and obstacles for the development of international VET services as identified by the MOEZ for the BEX funding line are valid for the IBB context as well. However, there are some reservations. A larger sample that goes beyond the funding context and includes all kinds of VET providers might reach a better internal consistency and, through that, a better empirical foundation.

Concerning research question (2) we found that especially the hindering factors are less important for the IBB-projects than highlighted by the MOEZ results. For most of the expected obstacles, the results of the online survey suggest that they are potentially important for the transfer of VET but have rather low relevance in our sample. Here, two explanations are feasible: First, the research context of the funding line IBB is a successor of the funding line BEX. Thus, project actors might have learned from the former context and potential obstacles could have been taken into account when planning a new project. Second, it could be that the changed focus of the funding line IBB (transfer of VET through business models and development of educational cooperation) compared to the previous funding directive (export of VET, BEX) has made other factors more important.

Specific findings for this research were that communication and customer integration factors becoming more important than found by former research. This is an important aspect regarding the further development of research instruments.

Moreover, profitability appeared to be an important aspect. It is inherent in the development of business models to be profitable. This aspect might work for market-related business models. However, the education sector contains not only private education offers, but also state-run education. If projects aim to transfer VET services to a public education sector, profitability appears at least questionable as an indicator for a successful implementation of VET services. The evaluation made by the participants of the survey highlights this aspect as a challenge.

Based on the participants' answers concerning the availability of an internationalisation strategy in many cases, it can be conservatively assumed that the participating enterprises were well prepared for the transfer of VET services. The findings also point to transfer activities based on certain conditions, e.g. clear customer segments, often with a German background

(German companies abroad). We found a strong correlation of appreciation of quality “made in Germany” with the presence of German industry in the project countries as well as with practical demonstration of VET content. One explanation might be the proximity of German education transfer, its actors and the companies in the target country, which are often German companies, as the survey data show. Another explanation might be the perceived image of German VET in the project countries. Assumed reputation of VET for example could work as a motor for the transfer activities (cf. Kühn, 2020). The negative correlation of lacking acceptance regarding VET in the project country and a limited pricing power might indicate that even if there is little acceptance of VET in the project country in general, however, this does not influence the pricing opportunities. This could suggest a clear customer segment or agreement and no need to compete with other providers at the market. The export component could be achieved, however, without effecting the VET infrastructure in the project country.

Related to the drivers it can be said, that the conditions to transfer VET are conducive in terms of external presence. The actors are aware of the necessity to adapt VET services to the local or national requirements in the projects’ target country. The negative correlation of German companies abroad and existing political support in Germany as well as in the project country is a notable result at this point. It could indicate that the more a VET service transferring approach targets German industry abroad, the less political support is given. Yet, we do not know, whether political support would be a driving factor or not. If an enterprise has its customers fixed with no or rather no intention to effect public infrastructure, there might be no need to involve political actors. It could also mean that the market entry strategy does not involve political support. This approach would indicate a strategy based on “known” customers and, through that, relativize the reported importance of customer integration. However, this aspect needs further research.

The role of certification is not as high as expected, while it is noteworthy that political support is often perceived weak. Particularly with regard to the continuity of educational services, it must be taken into account that sustainability can originate from a monetarily oriented business model on the one hand, but can also be a non-monetary part of the further development of an educational system or social capital on the other hand. The latter would require the appropriate involvement of political actors. This aspect should be deepened in further research.

## **6 Limitations**

Our study yielded important results, but they also have to be seen in the light of its limitations. A first limitation is the context itself. Since the funding line represents the environment of the study, the possibility of socially desirable statements by the participants cannot be excluded. Secondly, there is only limited generalizability of the findings due to the small sample and the funding context. However, in relation to the aim of limiting the analysis on the IBB funding line as the population, the response rate justifies to give valid statements about the effect of drivers and obstacles within the funding line. Future research with larger samples of VET providers and analysis of VET transfer activities beyond German actors are considered necessary to further solidify the effect of the MOEZ drivers and obstacles towards internationalisation. The validity of those variables in a broader sample could give valuable insights into VET transfer processes generally.

## **7 Conclusion**

Although this study has limitations, it provided insights into the design of VET transfer, the perception of the funding and transfer environment and the intensity with which an internationalisation strategy is pursued. Until now, there are not enough scientific studies on the subject of business models in the VET sector. There is still a high demand in this field due to changing environmental conditions, e.g. technological change. This study has contributed to fill this gap,



albeit within the limited scope of the IBB funding line. Relevant findings for international VET services are the emphasis of communication, cooperation and profitability as highly relevant factors for transfer processes, even though the funding line limits the significance or transferability of the results. At the political level, it can be discussed to what extent (expanded) cross-national political cooperation can respect the time factor. Still, there is a lack of evidence with regard to the success of business models and related promoting factors. Moreover, and maybe even more important, there is almost no evidence concerning those factors that would drive a system improvement. The question, how a VET cooperation could be of added value for the project countries as aimed by the funding line, has not yet been clarified. This research question would lead the market-oriented approach used in this study to a scope with capacity building.

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### Biographical notes

Dr **Ida Kristina Kühn** is a post-doctoral researcher at the Institute Technology and Education (ITB) at the University of Bremen. Her research interest focuses on transition system between school and work/apprenticeship and dropout, social competence, teaching and learning in adult and vocational education in national and international contexts, vocational service engineering research and design-based research.

Dr **Susanne Peters** is a post-doctoral researcher at the Institute Technology and Education (ITB) at the University of Bremen. She studied Economics at the University of Cologne (M.Sc. Economics). Her research interests focus on educational economics and vocational education and training systems in different countries.

Dr **Larissa Holle** is a post-doctoral researcher at the Institute Technology and Education (ITB) at the University of Bremen. Her research work focus on Comparative Vocational Education and Training with special emphasis on in-company learning and training in Asian countries.