Extending Marketplace Business Model in Academia: A Case of FONBoard

Aleksa Miletić, Ružica Stamenković, Dušan Barać, Marijana Despotović-Zrakić and Milica Simić

University of Belgrade, Faculty of Organizational Sciences, Serbia

{aleksa.miletic, ruzica.stamenkovic, dusan.barac, marijana.despotovic-zrakic, milica.simic}@ fon.bg.ac.rs

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Abstract: Marketplaces as a highly emerging type of business models have been implemented in a wide corpus of contexts. This paper aims to both enrich and implement the marketplace model within the university's ecosystem. We introduce FonBoard - a novel marketplace platform that brings together companies, students, organizations and teaching staff with the primary goal to support students in career development and matching with the most relevant employers. The Fonboard platform is described in detail from the perspective of features, roles, processes and business model. The initial results of the platform usage are presented as well.

1 INTRODUCTION

Although the number of opportunities in areas of IT and management has been extremely high and permanently growing, the job market for the experts in these fields is a fairly competitive market. To assist the students' career planning and attempt to alleviate the stress caused by an increasingly competitive job and residency market, new approaches and solutions have to be introduced (Ives et al., 2020).

Marketplaces enable and support transactions between independent supply-and demand-side participants (Täuscher & Laudien, 2018). They have been used as a one-stop-shop within a wide corpus of e-commerce solutions.

In this paper, we introduce FonBoard - a novel marketplace platform that brings together companies, students, organizations, and teaching staff with the primary goal to support students in career development and matching with the most relevant employers. FONBoard platform is described in detail from the perspective of features, roles, processes and business model.

The paper tries to investigate if this type of platforms can contribute to the development of students' carriers, while helping the companies to get closer to the students. Further the particular goal is to explore if the platform can bring benefits to the higher education institutions. This paper aims to both enrich and implement the marketplace model within the university's ecosystem.

2 THEORETICAL BACKGROUND

Electronic marketplaces are multisided platforms (D. S. Evans & Schmalensee, 2016; Parker et al., 2016) involving three stakeholders: seller, buyers and marketplace operators in the process of exchanging information about product offerings (Bakos, 1997). While buyers and sellers represent parties involved in the actual exchange, marketplace operators are a third party facilitating the said exchange (Fan et al., 2013; Maier & Wieringa, 2021).

Business models of these marketplace operators (Airbnb, Amazon, Uber, etc.) rely on independent participants to co-create value (P. C. Evans & Gawer, 2016; Täuscher & Laudien, 2018). These open business model, transaction centred platforms, are a centre topic of multiple research (Gawer, 2014; Mcintyre & Srinivasan, 2016) suggesting they may become a core organizing principle in today's economy (Kenney & Zysman, 2016; Parker et al., 2016; Täuscher & Laudien, 2018).

Numerous scholars have discussed marketplaces and aimed to both classify and investigate them as a kind of global phenomenon. Accordingly, there are different classifications and taxonomies. In (Täuscher & Laudien, 2018) the authors defined six clusters of business models for marketplaces based on various business model attributes and specifications (key activity, review system, pricing mechanism, industry scope, etc):

- **Efficient Product Transactions**

Web-based platforms focused on C2C and B2B, having large variety of physical products, which revenue model is based on commission fee or subscription fee mostly on supply side.

- **Digital Product Community**

Web-based platforms focused on C2C, being part of a primary non-commercial community providing digital and physical products, which revenue model is based on commission fee from both sides

- **Product Aficionados**

Web-based and mobile platforms, B2B and C2C oriented for exchanging knowledge about niche physical products with community or like-minded people, which revenue model is based on commission fee on the supply side.

- **On-demand Offline Services**

Web-based and mobile platforms, B2C oriented, connecting businesses from a large pool of variety offline services to customers; revenue model is based on commission and subscription fee, charged mostly on supply side.

- **Online Services**

Web-based platforms focused on C2C and B2B, providing novel online services with social networking character, which revenue model is based on commission and subscription fee, mostly on supply side.

- **Peer-to-peer Offline Services**

Web-based and mobile platforms, C2C oriented, facilitating offerings of novel offline services with community feeling within and outside digital platform; revenue model is based on commission fee on supply and demand side, or subscription fee for third-parties.

In (Wang & Archer, 2007) the authors established a good foundation for the research that have been conducted on the topic of electronic marketplaces (EM). They highlighted nine of the most accepted electronic marketplace classifications:

1) Number of Participants

Pure markets (many-to-many), monopolies/monopsonies (many-to-few), dyadic relations (few-to-many)

2) Relationship Dimension

Market-oriented or hierarchical.

3) Participant Behaviour

Spot-buying, repeat buying and program buying.

4) Ownership

Independent, consortia-based and private

5) Industry Scope

Horizontal or vertical

6) Market Mechanism

Exchange, auction, aggregator, collaborative platform

7) Products

Standardized products or differentiated products

8) Power Asymmetries

Neutral or biased (seller/buyer oriented)

9) Fee Structure

Transaction fee, subscription fee, membership fee, licence fee.

The most important B2B and B2C ecommerce marketplaces of today, such as Amazon and Aliexpress have been growing permanently for years. At the same time, job ads platforms have increased their impact on the online market.

Due to the newest movements and interplay of numerous impacts on the job market, job advertising additionally gained the interest. As part of a wider recruitment process designed to attract suitable qualified candidates for a job, job ads have been the most commonly used means of recruiting personnel in a labour market (Kim & Angnakoon, 2016).

Employers rarely post job openings in newspapers anymore, but instead advertise job openings on their websites or through online classified sites, government-run job banks, and free or fee-for-service job board (Kim & Angnakoon, 2016).

The current labour market is generally characterized by rapidly changing work conditions (Karaca-Atik et al., 2023).

A student-directed career development experience can positively impact student's career direction and professional development (Steeb et al., 2021). In this paper the authors introduced student-directed career development program on career and professional development between the second and third year of a doctor of pharmacy curriculum. In (Seyitoğlu et al., 2022) the authors discusses career plan development in post Covid era for the students in area of tourism.

This systematic review contributed to the literature by presenting an overview of 21st-century skills that were valued in the labour market for social sciences graduates' career sustainability (Karaca-Atik et al., 2023). Accordingly, the teachers' and university's role is to enhance career development through different channels and services. In addition, the main problem faced by final-year students of various study levels is where and how to find an internship or first job.

Although marketplaces are booming at the moment, there are very few examples of the marketplace that were implemented in educational context and for purpose within university' ecosystem.

Massive open online course (MooC) platforms are recognized as the most used implementation of the marketplace model (Mozahem, 2021). Finally, the analysis showed that despite increasing academic interest in online education, academics have been slow to enter the digital marketplace as service providers. Further, there are certain e-commerce services that are provided to the stakeholders by universities, such as bookstores, gift shops, tickets, etc. However, an enriched job marketplace that strongly helps students to develop their careers is quite a novel approach.

3 FONBOARD

FONBoard is a portal for advertising jobs, internships, scholarships, events and presenting companies, sharing knowledge and good practices. The idea is to create a unique place where companies will be able to post vacancies for jobs/internships/courses. On the other hand, students will be able to apply to these ads or see more information about the companies. The portal is primarily intended for FON students, but it can become a place where all other interested parties will come. It facilitates an ideal synergy between FON students and companies seeking specific skill sets possessed by FON students. By leveraging this familiarity, companies can promptly discover individuals whose skill sets are optimally aligned with their organizational requirements. Consequently, FONBoard effectively streamlines the talent acquisition process, significantly reducing the time and effort expended in finding the ideal employee for their company.

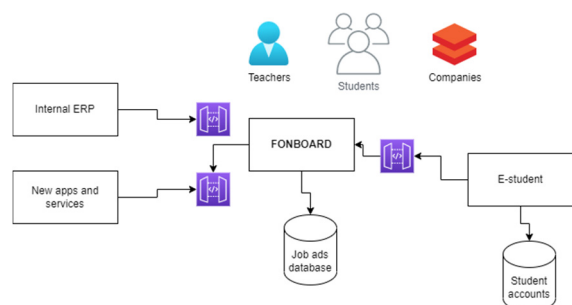Next figure portrays the main components of the FONBoard system.

Figure 1: FONBoard – overview of the system.

FONBoard is basically custom-made web portal that encompasses a set of features. It is connected both to

Table 1: Key stakeholder benefits.

Stakeholders	Benefits
FON	- Relationship and community building with companies - Real and high-quality inputs about market demands - Curriculum evaluation based on market demands - External financing
Students	- Direct channel for: internship, employment, event participation, etc. - Exclusive information access and advantages in employment process, compared to other faculties - Review of market demands in terms of skills and knowledge - Matchmaking exclusive list of companies to students with specific sets of knowledge gained through education at FON - Platform eliminates the need to search through different job postings, allowing them to use specific filter categories for a more precise search - Students can access a blog that contains valuable information from business experts, which are not covered within the curriculum, but represent good practice - Provides the latest information on opportunities for students to improve their education
Companies	- Exclusive access channel to FON students - Possibility of quality employer branding - Collaborative environment - Finding the best candidates for open positions - Targeting students and shortening selection time
Teachers	- Improve their curriculums which means teaching students in practical knowledge needed by external stakeholders - In addition to the scientific research value, the subjects will strengthen the practical and theoretical side depending on the needs of the market - A kind of check if their work with students has been well done.

internal ERP solution and FON' information system that contains data about the students.

The students have to use the credentials they already have from our IS in order to log in on FONBoard.

FONBoard will be effectively promoted to both companies and students through a comprehensive blend of internet marketing strategies and offline promotional activities. In order to attract companies, digital marketing techniques such as targeted social media campaigns, email marketing, and search engine optimization (SEO) technique will be employed to increase brand awareness and generate interest in the platform. Additionally, an annual FONBoarding event will be organized at the faculty, creating a platform where companies and students can interact in person,

3.1 Key Stakeholder and Their Benefits

The following table shows the most significant benefits for key stakeholders: Faculty of Organizational Sciences (FON), Students, Teachers and Companies.

3.2 System Features

FONBoard is a web-based platform with following features:

- Home page: showing basic information about the platform, list of current partner companies, offer corner, login.
- My profile: student can edit their interests and preferences, subscribe to the newsletter, and view the list of favourite postings, list of favourite companies (not available for companies)
- Company profiles: user can see the list of all partnering companies and explore single company profile. Each company profile has information about company, list of benefits and experiences from current/former employees, and list of active postings
- Internships / employments: user can see the list of all internship/job postings, browse them by several criteria and explore single posting. Each posting has a description, label internship/job, list of tags, application deadline, add to favourite (available for students only) and meet the company button.

- News/Events: user can see the list of all news/events and browse them by type and explore single post
- Blog with the topics related to the students' careers development
- Offer corner allows user to browse different business packages (described in Section 4).
- Contact page: where user can contact FON for any questions.

Also there are number of features in development phase, such as FAQ, uploading CVs and Alumni which are planned to be released until the end of the year.

4 BUSINESS MODEL

FONBoard business models is subscription based, on the supply side, where companies can choose from three types of packages (shown in the Table 2):

- Basic (B)
- Standard (S)
- Premium (P)

A subscription based model was chosen primarily as FON wanted to harness and use all the common benefits this model bring: increased LTV, increased loyalty, strong customer engagement, opportunites for cross-selling, etc.

Table 2: Company package options.

Options	Packages		
	B	S	P
Profile page picture and company logo	√	√	√
Company description (500 words)	√	√	√
Photo gallery	√	√	√
Social media links	√	√	√
Home page company logo	√	√	√
Portal content access	√	√	√
Free STANDARD postings	0	2	2
Free PREMIUM postings	0	0	3
Posting benefit description	X	√	√
Employee experience	X	√	√
Corporate video	X	√	√
Blog posts	0	3	∞
Pinned postings	X	X	√
Brochure (other PDF content) upload	X	X	√
Link to company promo content	X	X	√
Profile visits reports and analytics	X	X	√

Posting package options are shown in the table below.

Further, FONBoad is one of the several services developed for the companies and should follow the FON's strategy of establishing long-term partnership with the companies.

Beside the base subscription, business model depends on pay per addon system as well. Pay per addon is linked to the posting package described in Table 3.

Table 3: Postings package options.

Options	Packages	
	S	P
Unlimited number of words in the posting	√	√
Place in search results	√	√
Logo	√	√
Link to application	√	√
Max number of keywords	3	10
Posting design	X	√
Pinned posting	X	√
Linked company postings	X	√

The companies can get some more feature, not directly visible within the platform, but connected to the other services in our digital business ecosystem:

- Promotion of the job ads via FON social networks accounts
- Harnessing newsletters as a channel. The newletters are sent in accordance to the interests students declared within their profiles.
- Publishing jobs related content to the FON website.

The enhancements of the marketplace are reflected in the educational component, i.e. set of content related to the career development of the students on one side and opportunities for companies on other:

- Blog with plethora of the content primarily oriented toward development of the students
- Basic matching algorithm that connects students' interests with companies' job ads
- Opportunities for CSR and employer branding through participation in by companies
- Placement within the FONboard automatically provide company visibility in whole FON's digital business ecosystem.

5 IMPLEMENTATION AND EVALUATION

Based on the system feature description following images show the implementation and current look of the FONBoard platform available at onboard.fon.bg.ac.rs

Figure 2 shows list off all company profiles registered on the platform. Each card shows company name, logo, number of postings and add-to-favourite button (available only for students). Figures 3a and 3b show single company profile, where basic information about the company is available. Depending on the selected company package (Table 2) different options are available: corporate video, benefit descriptions, employee experience, linked postings.
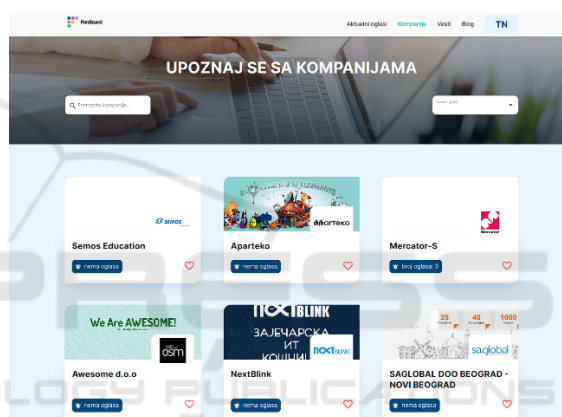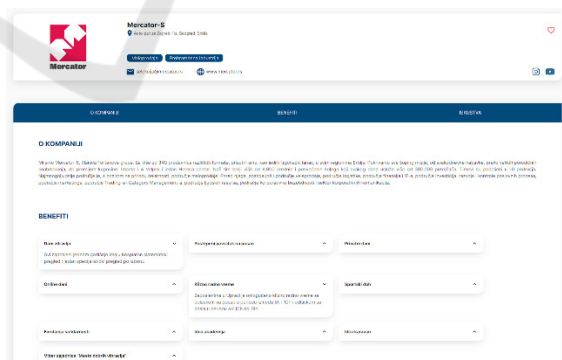

Figure 2: Company list preview.

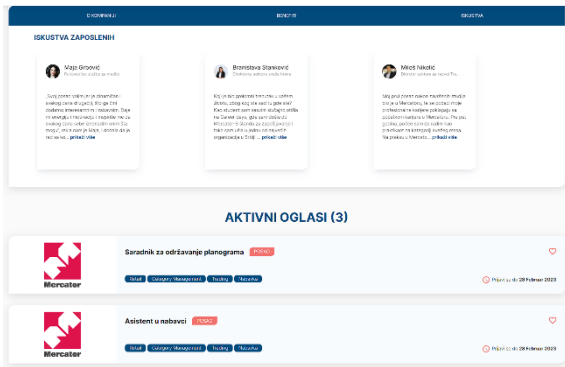Figure 3a: Company profile and benefits.

Figure 3b: Company employee experience and linked postings.

Figure 4 shows the list of all postings that can be filtered by tags (keywords), domain, workplace and type (job/internship). For each posting there is a dedicated page showing detailed information about the posting (Figure 5)
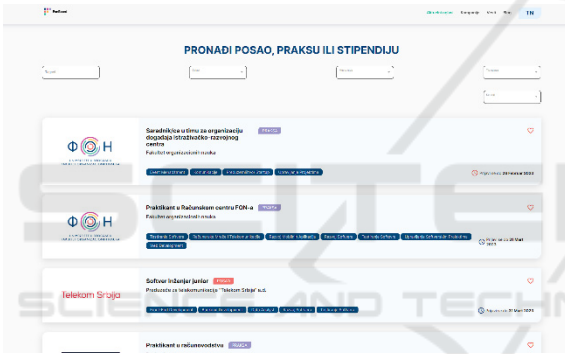

Figure 4: Job/internship postings.

Figure 5: Single posting view.

Figure 6 shows list of all news and events that can be filtered by different criteria.
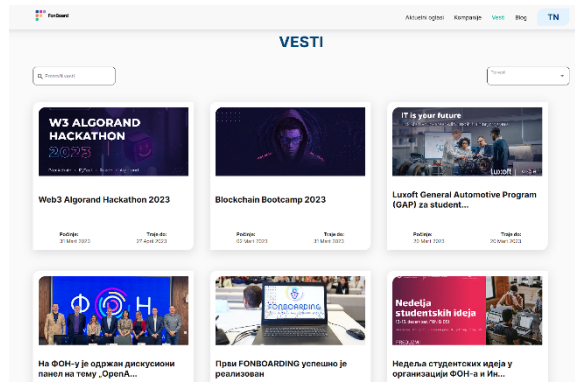

Figure 6: News and events.

My profile section can be viewed clicking on the profile icon in the top right corner and it allows user to subscribe to newsletter and edit their interest (Figure 7a) and see companies and postings they added to favourite (Figure 7b).
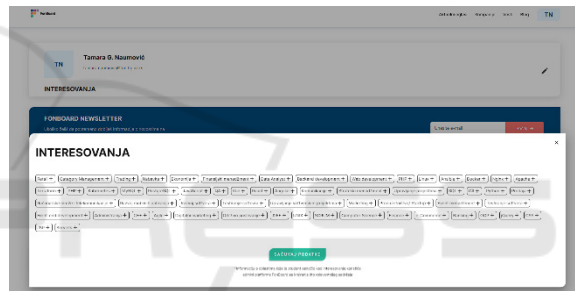

Figure 7a: Student's interests.

Figure 7b: List of favourite companies and postings.

The platform has been active since the first week of February, 2023. Briefly, these are the current numbers within the platform:

- 51 strategic partners have been invited to participate
- 35 job ads are valid at the moment
- 44 companies opened their accounts, i.e. company profiles

- 250 students are active at the moment
- Since now 2 students have got a jog offer in the company, after the application via the FONBoard

6 CONCLUSIONS

Considering the fact that marketplaces encompass different types of roles that have to be permanently balanced, building a marketplace is cumbersome endavour.

We introduced the platform that should bring a huge value to all the participants in the system, particularly students. Considering the numbers after initial release and going live, the concept has been proved already.

From the perspective of promotional activities, omnichannel approach is something we could see in different business contexts today. (Kim & Angnakoon, 2016). However, in parallel, some certain papers pointed out that diversification of the channels for the job places promotion can bring a number of challenges (Maier & Wieringa, 2021)

Future research and development activities are directed toward establishing the position of FONboard within FOS's business ecosystem and further fosering of talent management. The power of the alumni should be employed as well. AI layer for matching companies' needs and students' interests is what will be improved in the future. More analytics will help us adjust and reshape the platform.

REFERENCES

Bakos, J. Y. (1997). Reducing Buyer Search Costs: Implications for Electronic Marketplaces. *Management Science*, *43*(12), 1676–1692. https://econpapers. repec.org/RePEc:inm:ormnsc:v:43:y:1997:i:12:p:1676 -1692

Evans, D. S., & Schmalensee, R. (2016). Matchmakers: The new economics of multisidedplatforms. *Harvard Business Review Press*, *June*, 54–62. http://ssrn. com/abstract=2793021Electroniccopyavailableat:https ://ssrn.com/abstract=2793021

Evans, P. C., & Gawer, A. (2016). *The Rise of the Platform Enterprise: A Global Survey*. The Center for Global Enterprise.

Fan, Q., Yul Lee, J., & In Kim, J. (2013). The impact of web site quality on flow-related online shopping behaviors in C2C e-marketplaces. *Managing Service Quality: An International Journal*, *23*(5), 364–387. https://doi.org/10.1108/MSQ-11-2012-0150

Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research Policy*, *43*(7), 1239–1249. https://doi.org/10.1016/j.respol.2014.03.006

Ives, R. C., Klein, K. C., & Mason, N. A. (2020). Career and professional development services for pharmacy students. *Currents in Pharmacy Teaching and Learning*, *12*(9), 1110–1115. https://doi.org/10.1016/ j.cptl.2020.04.026

Karaca-Atik, A., Meeuwisse, M., Gorgievski, M., & Smeets, G. (2023). Uncovering important 21st-Century skills for sustainable career development of social sciences graduates: A systematic review. *Educational Research Review*, 100528. https://doi.org/https: //doi.org/10.1016/j.edurev.2023.100528

Kenney, M., & Zysman, J. (2016). Summit on Human Gene Editing. *Issues in Science and Technology*, *32*(3), 61–69.

Kim, J., & Angnakoon, P. (2016). Research using job advertisements: A methodological assessment. *Library and Information Science Research*, *38*(4), 327–335. https://doi.org/10.1016/j.lisr.2016.11.006

Maier, E., & Wieringa, J. (2021). Acquiring customers through online marketplaces? The effect of marketplace sales on sales in a retailer's own channels. *International Journal of Research in Marketing*, *38*(2), 311–328. https://doi.org/10.1016/j.ijresmar.2020.09.007

Mcintyre, D., & Srinivasan, A. (2016). Networks, platforms, and strategy: Emerging views and next steps. *Strategic Management Journal*, *38*. https://doi.org/10. 1002/smj.2596

Mozahem, N. A. (2021). The online marketplace for business education: An exploratory study. *International Journal of Management Education*, *19*(3), 100544. https://doi.org/10.1016/j.ijme.2021.100544

Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform revolution: How networked markets are transforming the economy and how to make them work for you*. WW Norton \& Company.

Seyitoğlu, F., Atsız, O., Kaya, F., & Taş, S. (2022). The two-way perspective of tourism undergraduates towards (post-)viral world: The future of tourism, and vocational development and career. *Journal of Hospitality, Leisure, Sport and Tourism Education*, *31*(September 2021). https://doi.org/10.1016/j. jhlste.2022.100400

Steeb, D. R., Zeeman, J. M., Bush, A. A., Dascanio, S. A., & Persky, A. M. (2021). Exploring career development through a student-directed practicum to provide individualized learning experiences. *Currents in Pharmacy Teaching and Learning*, *13*(5), 500–505. https://doi.org/10.1016/j.cptl.2021.01.020

Täuscher, K., & Laudien, S. M. (2018). Understanding platform business models: A mixed methods study of marketplaces. *European Management Journal*, *36*(3), 319–329. https://doi.org/10.1016/j.emj.2017.06.005

Wang, S., & Archer, N. P. (2007). Electronic marketplace definition and classification: Literature review and clarifications. *Enterprise Information Systems*, *1*(1), 89–112. https://doi.org/10.1080/17517570601088380.