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Making waves: the valuation of innovations in San Sebastian's surf economy

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ABSTRACT

This study takes a valuation perspective to study how and where products and innovations are gaining 'economic significance' in the contemporary economy. Building on a recent research stream in economic geography and urban and regional studies, it highlights that the economic value of many products is not formed within production systems alone, but relies on coconstructed connections between production and consumption systems, playing out across multiple geographies. It distinguishes between three types of economic valuation pathways - namely technical, experiential and identity-based – which although analytically distinct may actually build and reinforce one another. This approach is empirically illustrated with the case of the surfrelated economy in the city of San Sebastian (Basque Country, Spain), which is used to make a broader point about the growing relevance of a valuation approach to understand competitive advantage and economic renewal in localized production systems.

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Valuation; quality conventions; territorial innovation; clusters; surf; smart specialisation

1. Introduction

The economic renewal of cities and regions has been long linked with their capacity to innovate and diversify towards new economic activities (Boschma, 2017; Jacobs, 1969). In urban and regional studies, these innovation processes have been extensively studied by models that highlight the interactions between local actors in their efforts to learn, share and recombine knowledge, backed by place-based institutional settings that lead to regional competitive advantage (Asheim, Boschma, & Cooke, 2011; Moulaert & Sekia, 2003; Storper, Kemeny, Makarem, & Osman, 2015). By primarily focusing on production systems, these models implicitly conceptualize innovations as 'creations of economic significance' (Edquist, 1997, p. 1), brought to life by firms and entrepreneurs and valued through exogenous demand forces.

Notwithstanding their contribution to understand the geographies of knowledge and innovation, these perspectives have been criticized by taking an over-productionist approach to innovation and by treating demand as a black box, thus saying little about how actually the 'economic significance' of new products and services comes about,

bringing monetary flow to cities and regions (Crevoisier, 2016). Although the role of advanced users and proximity to markets has been long recognized in the cluster (Porter, 2000) and in the innovation system's literature (e.g. Cooke, 2007), consumption is typically portrayed as an exogenous factor condition, epitomized by anonymous users or, at best, by 'smart neighbours' that signal market trends and inspire the development of sophisticated new products (Grabher, Ibert, & Flohr, 2008).

Recent studies have started to address these issues by taking a 'valuation' perspective to territorial innovation. These studies seek to understand how and where producers and consumers interact to co-define and ascribe value to new products and services (Crevoisier, 2016; Jeannerat, 2013). This perspective highlights that in an increasing knowledgeand cultural-based economy, consumers derive value not (only) from the intrinsically technical or functional characteristics of a product, but rather from intangibles such as the experiential context and the associations that the product evokes (Asheim, Coenen, & Vang, 2007; Hauge & Power, 2013; Jansson & Waxell, 2011; Pike, 2015). The result is an extension - and, occasionally, a shift - from production towards consumption systems as the central locus of value creation (Jeannerat & Kebir, 2016).

This paper builds on this emerging strand and explores the construction and the intersection of different economic valuation pathways for the case of surf-related innovation in the city of San Sebastian (Basque Country). San Sebastian has been home to a cluster of producers of craft-made surfboards and accessories and has been diversifying its surf economy into related products such as surf fashion and leisure concepts. This paper shows that the economic significance of these innovations derives not only from superior 'functionalities' - as portrayed by conventional territorial innovation models - but increasingly from the way they become associated with place-specific 'experiential' features (such as the city's distinctive cultural and built environment) and the constructed links that producers strategically establish with the 'values' of a global surf community (innovations 'from surfers to surfers'). Because of this and in order to remain competitive, the paper analyses how surf-related producers in San Sebastian are actively stretching and organizing connections between production and consumption systems, across local and multi-local configurations.

The paper is organized as follows. In Section 2, a notion of valuation is put forward, as well as three interrelated (yet analytically distinct) modes of valuation: technical, experiential and identity-based. Section 3 describes the research setting and methods, while Section 4 empirically analyses different valuation modes around San Sebastian's surf economy, fleshing out rationales, actors, value co-construction practices and their geographies. Section 5 concludes and discusses implications for an improved understanding of local economic renewal and for new types of place-based economic policy.

2. Conceptual background

2.1. From territorial innovation to territorial dimensions of valuation

Over the last decade, the development of increasingly sophisticated territorial innovation models has run parallel with a growing interest by economic geographers in the role of users and consumers as sources of innovation (Aoyama, Murphy, & Hanson, 2010). Beyond exploring 'doing-using-interacting' modes of innovation (Asheim et al., 2007; Van Winden, Van den Berg, Carvalho, & Van Tuijl, 2010) in which users are often companies and interact in a business-to-business environment, it has been argued that also final consumers increasingly share room with producers in ever more complex innovation ecologies (Grabher et al., 2008).

For example, Grabher et al. (2008) show that it is not only producers that try to harness relevant knowledge from 'smart costumers' (as expressed in territorial innovation models), but also final consumers that co-organize to generate commercially valuable knowledge. They are not passive but 'shout back to producers', both absorbing and resisting pre-packaged messages of marketeers (Cova, Kozinets, & Shankar, 2007, p. 4). Von Hippel (2009) demonstrates that user involvement in innovation occurs in a large variety of manufacturing and service activities, ranging from software development to medical and sports equipment production. This has given rise to blended types of user-producer codevelopment, which, from a geographical perspective, frequently take shape in temporary co-presence and ephemeral geographies rather than through permanent co-location in production clusters. A case in point is the emergence of spatially distributed consumer communities and product enthusiasts (Grabher et al., 2008), or 'footloose customers' that move in space, engaging with different markets in search of experiences (Pine & Gilmore, 1999).

Related with the previous, other studies have focused on the ways through which producers and users interact in space to co-define the value of products and innovations (Jeannerat, 2013; Jeannerat & Kebir, 2016). Based on sociological studies of markets and valuation (e.g. Beckert & Aspers, 2011; Callon, Méadel, & Rabeharisoa, 2002), these approaches share the notion that the demand for products and innovations is not exogenous or given but socially constructed through complex and dynamic interactions between producers and consumers (Hauge & Power, 2013). These approaches bring consumption systems and markets to the core of value chains and users become '... increasingly appreciated as reflexive actors who are actively involved in the evaluation, modification and configuration of products' (Grabher et al., 2008, p. 253).

Jeannerat and Kebir (2016) describe valuation as a dynamic dialogue between production and consumption systems, occurring across multi-local geographies. It is in this interaction that producers and consumers not only co-develop new products and services, but also where they may produce and negotiate moral and societal values. Valuation is thus understood as a process of qualification (and later commercialization), governed by values and social conventions of 'quality' to which actors refer to during their innovation, production and consumption activities (Beckert, 2009). In qualifying products and services, besides producers and consumers, intermediary actors (e.g. media, opinion makers) and devices (e.g. logos, certificates) become increasingly important, shaping recognition and engagement (Callon et al., 2002; Jansson & Waxell, 2011; Jeannerat, 2013). Therefore, producers face a growing challenge of establishing continuity between their own capabilities and knowledge resources and ever-changing consumer attachments. As put by Jeannerat and Kebir (2016, p. 276),

(...) Actors face important uncertainty in establishing, maintaining and organising a relational and institutional continuum between the reproduction/renewal of particular knowledge resources and the final consumers' attachment to or detachment from particular market goods and services. This leads to the question of how such a continuum is socially and institutionally organised in time and space.

Therefore, consumers' valuation of a product or service depends not only on its functional and technical properties, but on the symbols and values that become associated with it (Beckert & Aspers, 2011; Scott, 2004). Such a form of valuation has been partly captured by the knowledge base approach (e.g. Asheim et al., 2007), which considers the embedding of symbols, images and aesthetics as increasingly relevant for product innovation in the knowledge economy, namely as symbolism intersects with science and engineering-based innovation modes (Van Tuijl & Carvalho, 2014). However, like in other territorial innovation approaches, demand is still somehow exogenous, and the focus lies on analysing how and where the necessary (symbolic) inputs for innovation are accessed and mobilized.

Yet, in a growing number of markets, value is not only derived from product's functionalities, or even from distinctive service experiences – the typical example being people ready to pay €25 for a coffee on St. Marco square in Venice – but also from the connection between the product and consumer's own personal values (e.g. sustainability, ethics, 'edginess'), which brings the dialogue and the (co-constructed) links between producers and consumers centre stage in the analysis. For example, in a study on the territorial valuation channels of Swiss watchmaking, Jeannerat (2013) shows that what is actually mostly valued in a pricey Swiss watch is authenticity, which relies on complex, co-constructed combinations of cultural, experiential and technical features, coherently mobilized in the Jura region but in articulation with advanced consumption milieus in global cities. Hauge and Power (2013) reach similar conclusions in a study about winter sports equipment, in which technical performance and symbolic value are closely intertwined and connected to concrete places (selected sky resorts), the latter being sites of innovation but also of dialogue between users, producers and intermediaries towards shaping a product's perceived quality.

2.2. Types and geographies of valuation

Hence, drawing on a slight adaptation of Jeannerat's (2013) work, three types of market valuation processes for products and innovations can be tentatively distinguished, each of them operating through potentially distinct territorial and geographical configurations: 'Technical, Experiential and Identity' – driven market valuation.

In 'Technical valuation' processes, the value of innovations is primarily derived from products' inherent physical, functional or technical features, that is, what it basically allows the consumer to do. In ideal forms of technical market valuation, consumers are indifferent about the identity of the producer/seller, namely as quality signals are provided by technical standards that intermediate between user and producer. Innovation is equated with technology and/or improvements in the production process. This mode of valuation has been preeminent in most territorial innovation models, which stress the role of local and regional production systems in which innovations originate before being distributed widely. Innovation is underpinned by physical and relationally proximate connections between producers, knowledge institutes and other supportive organizations, organized in local and/or trans-local production networks. As argued by Jeannerat (2013), technical-driven valuation processes primarily highlight the spatial organization of production as the key coordination challenge for producers.

In a different fashion, 'experiential' processes of market valuation – explored e.g. in the literature on the experience economy (LaSalle & Britton, 2003; Pine & Gilmore, 1999) – highlight that, for many products and services, market value results not from functional features but from consumer's experiences in memorable environments, with unique features. In this domain, producers become 'stagers' who coordinate their activities to deliver a holistic experience. Experientially valued innovations are not primarily of a technical nature, but involve the offering of novel and distinct experiences. Intermediation is about the attraction of consumers to a specific 'stage', being that media and events play a pivotal role in the process. From a geographical perspective, the value of consumption is inseparable from its immediate spatial context: production and consumption are colocated. The quality of services and goods is associated with the quality of place. In that vein, places are not 'production' but 'staging' systems in which local offers and innovations gain value from the 'memorable engagement of consumers' (Jeannerat, 2013).

Finally, in 'identity'-driven market valuation, economic value primarily results from consumers' appreciation of the values and ideals that a product embodies or signals e.g. authenticity (Jeannerat, 2013), sustainability, roughness, 'being edgy', etc. that resonate with the identity of the consumer. In line with Hetherington (1998), identity is meant here as an issue of wanting to belong to a community (Hetherington, 1998, p. 49). The basis for community election is emotional and empathetic, the identification with likeminded others. This resonates with the literature on postmodern and tribal marketing, for which 'the link is more important than the thing' (Cova, 1997, p. 311) and products are valued for what they refer to (Firat & Venkatesh, 1993). This literature argues that there are no such things as inherently 'cool' products, but products that become cool when used by cool people. Therefore, when driven by identity, valuation processes do not rely on technical or experiential features per se, but on the recognized status of producers and trend-setting consumers (Cova et al., 2007). Users recognize, agree about, influence and legitimize products and brands. Moreover, producers seek to enthuse consumers into their brand and they have the challenge to engage with consumers' changing values and identities. Consumers are seen as loosely linked in distributed communities of aficionados (e.g. watch connoisseurs, hipsters, surfers), with specific ethos, consumer patterns, lifestyles and heroes that signal particular values, distinguishing them from the others (Arbonés Aran, 2015; Jeannerat, 2013).

In identity-driven market valuation, a producer's place of origin is not indifferent to consumers. Cities and regions can signal particular values and messages – e.g. through shared narratives about a place's history and identity –, namely when backed by place-specific technical and cultural assets (Crevoisier, 2016; Jansson & Waxell, 2011; Jeannerat, 2013). Hence, a product's economic significance is enhanced when it becomes associated with places whose narrated 'values' converge with the ones producers envision to communicate – e.g. 'designed by Apple in California' (Pike, 2015) – and also where consumer communities and aficionados are present and may be personally involved in co-creation. Yet, despite the relevance of place, the dynamic interplays between production and consumption systems are not only local. Due to the increased spatial mobility of producers and the geographical distribution of consumer communities, valuation processes often take place in multi-local configurations, in which production and consumption milieus become coupled, involving forms of temporary proximity and virtual interaction, giving rise to spatially nuanced circuits of valuation (Grabher et al., 2008; Pike, 2015). Thus,

identity-based valuation is better understood not as a specific valuation regime evolving besides technical and experiential valuation, but rather a 'meta' regime that can provide an integrative lens to articulate technical and experiential valuation in which producers strive to interact with consumer subcultures (or tribes) and where place-based features fit in.

2.3. Summing up

There is mounting evidence that the role of users and user communities in innovation has grown. Moreover, recent studies also highlight that the 'economic significance' of many products and innovations is not formed within production systems alone. Rather, constructed connections and new continuums between production and consumption systems are becoming essential channels of value creation for many products and innovations in the contemporary economy. Those connections or market valuation processes may run through different channels (e.g. technical; experiential and identity-based), each of them operating through potentially distinct geographical configurations.

While some valuation processes may be closer to ideal forms, it can be expected that innovations in many old and new industries will rely on multiple and interconnected types of valuation simultaneously, though in different degrees. From the perspective of cities and regions, this suggests that, beyond being milieus for knowledge production and recombination - as portrayed in territorial innovation models -, their competitive advantage and economic renewal may increasingly depend on their capacity to intermediate between production and consumption systems towards co-creating and co-defining what is valuable.

In the reminder of this paper, the previous propositions are explored for the case of the surf-related economy in the Basque city of San Sebastian, using the three valuation modes as heuristics to organize the empirical evidence.

3. Research setting

3.1. Surf industry's production and innovation dynamics

Surfing primarily consists of riding waves, with specialized equipment. Over the last decades, a global industry developed around surfing, including the design, production and distribution of surfboards, accessories, apparel and surfwear (e.g. clothing, bikinis, shoes and sunglasses) (Global Industry Analysts, 2011). Surfing has traditionally been linked with a young, rebellious culture and hedonistic lifestyle (Booth, 1996) and the endless search for the 'perfect wave' (Ponting, 2008). Yet, it has been losing some of its former 'outlaw' connotations. For example, it is estimated that the median surfer in the U.S.A. earns now more than \$75.000 a year and is in its mid-thirties (Kvinta, 2013).

Surf-related production systems have been remarkably clustered in space, namely around a few towns in California (Santa Cruz), Australia (Golden Coast; Torquay) and Europe (French Aquitaine; Basque Country). Several studies explain their early development in the 1980s and 1990s using territorial innovation models, namely the cluster theory (Logue, Argent, & Warren, 2015; Stewart, Skinner, & Edwards, 2008). Studies on Australian surf clusters highlight the proximity to beaches in the forefront of the growing surfing movement as driving force and, hence, the presence of 'smart costumers' (surfers) that understood technical quality and signalled innovation needs. Local clusters typically started with a limited number of very small companies, based on their founders' surfing experience and craft skills. Over time, they attracted and spun off new businesses, contributing to the formation of localized pools of specialized labour, supportive activities and industry organizations. Local inter-firm rivalry further enhanced cluster dynamics, as illustrated by the cases of Quicksilver and Rip Curl, two of the biggest surfing companies in the world, both originating from the small beach town of Torquay, Australia (Stewart et al., 2008).

Despite the overall growing demand for surf products and equipment worldwide (Kvinta, 2013), many producers from traditional surf clusters have experienced increasing competition and tightening margins. Low-cost production emerged in Asia and new design locations sprung up in Brazil (Chavarria, 2015). Some of the world's largest surf manufacturers and fashion companies (e.g. Billabong, Quicksilver, Rip Curl) saw their profits decline, and progressively trimmed innovation budgets. Chavarria (2015) suggests that these firms pay the price for turning to mass markets and detaching themselves from 'original' surf values and its rebellious outlaw culture. Jackson (2013, p. 1) argues that 'the 'made by surfers for surfers' mantra of the industry's early days is now a distant memory when it comes to the major brands'. In such a changing playing field, Logue et al. (2015) reports that the provision of subsidies to the surf industry and traditional 'cluster policy' incentives in Australian towns - e.g. to attract surf companies, enhance design and production skills, grow exports and standardize production - has produced minimal effects and inter-firm cooperation has inclusively decreased, jeopardizing surf clusters' renewal.

3.2. Case study and methods

San Sebastian (Donostia, in Basque) has roughly 186,000 inhabitants and is a well-known holiday destination in Northern Spain. It has also been home to a surf-related production system that stretches from the French towns of Biarritz and Hossegor, in the French Aquitaine region (Figure 1). San Sebastian's surf economy is relatively small vis-à-vis major Californian and Australian counterparts, but has been growing over time. In the city of San Sebastian alone, surf equipment-related industries generated a direct turnover of €20 million in 2014 (vs. 14 million in 2011), directly employing around 300 people (vs. 230, in 2011) (Fomento San Sebastian, 2014).

The emergence of San Sebastian's surf production system echoes the pattern of other surf clusters. It dates from the 1970s with the foundation of the first family businesses by local surfers, closely linked with a nascent surf movement in Europe and the first surf contests in San Sebastian and Zarautz (Gonfaus, 2006). Over the years, a few pioneer businesses became well-known international surf equipment brands (e.g. PUKAS), attracting and spinning out new companies and innovations in surf design, production and fashion; moreover, surf tourism has developed into one of the largest tourism segments in the city (Fomento San Sebastian, 2013). San Sebastian hosts one of the leading surf film festivals in the world, and surfing has been closely connected to the city's built and natural environment, being possible to surf in close proximity to the historical city centre (Figure 2). All in all, these features and dynamics in the midst of a globally changing industry represent a rich setting to gain insight into how and where multiple valuation

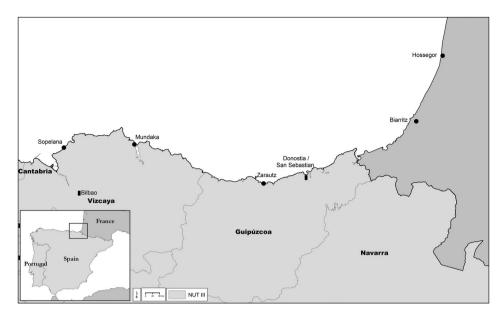


Figure 1. Geographical context (own elaboration).

channels – 'technical', 'experiential' and 'identity-based' – and related production-consumer connections are established, interact with one another and influence the renewal of localized production systems.

In order to analyse how surf producers in San Sebastian are actively stretching and organizing connections between production and consumption systems, the paper relies on 21 in-depth, semi-structured interviews with a variety of actors and intermediaries involved in San Sebastian's surf economy, such as representatives of old and new local



Figure 2. La Zurriola beach.

surfboard manufacturers; engineering companies; surf shops and surf schools; hotels; event organizers; research institutes; policymakers; cluster managers and other experts. Interviews were conducted during 2012 and 2014 under the setting of two research and knowledge exchange projects, and focused on three main topics: (i) the development of surf industries in the city; (ii) innovation, new value-creation models and relevant geographies and (iii) the role of local policy. Interviews were carried out in tandem by the two authors; they took roughly between 45 minutes and two hours and extensive interview reports were produced afterwards. Beyond representing the production side, many of the interviewees were also active surfers and surf consumers themselves, thus allowing to better understand production-consumption interplays and co-construction dynamics in surf-related valuation in San Sebastian and beyond.

To increase validity and reliability, interview data were complemented and triangulated with several secondary sources such as company and industrial reports, magazines and specialized surf publications, websites, web-forums and weblogs, press releases and local industry surveys. These sources provided additional validation and insight into how consumers and other actors (e.g. global surf brands) and intermediaries (e.g. specialized media) from outside San Sebastian perceive, co-construct and validate messages communicated by local firms and industry players. These data (as well as from the interviews) were coded along the key theoretical constructs of the paper – namely valuation modes, types of actors and spatial configurations. Preliminary analyses and pattern finding were co-developed by the two authors and validated afterwards with two experts in the surf industry.

4. Valuating San Sebastian's surf economies

4.1. Technical valuation

Over the last decades, the Basque country has built up a reputation as strong engineering region with many innovative industrial clusters (Ahedo, 2004). These features are closely mirrored in the engineering parts of San Sebastian's surf innovation. Some of the local industry's most emblematic products (e.g. surfboards, apparel and artificial wave-generation systems) increasingly benefit from localized engineering skills and networks to improve their intrinsic functionalities and production processes. This has been extending the traditional crafts-based nature of many surf products, leading to the archetypal technical valuation processes depicted in territorial innovation models.

Recent developments in local surfboard manufacturing illustrate the previous. As surfboards are 'becoming more and more about graphics, mechanics and electronics' (interview (10)), product and process innovation increasingly rely on crossovers with chemicals, software, industrial design and tooling industries. For example, PUKAS – a leading surfboard manufacturer from San Sebastian – formally cooperates with engineering departments of Basque universities to improve production processes and develop software (e.g. surf-CAD) for their surfboard modulation machines. The same goes for the development of new materials (e.g. foams, resins, polymers), namely after the closure in 2005 of the world's largest supplier of surfboard foams in the U.S.A. (for environmental reasons). At the same time, other functional innovations have been spinning out of local companies in related sport's equipment industries (e.g. ski), such as new designs

to increase surfboard's floatability, manoeuvrability and speed (interview (6)). Technical and functional valuation dynamics are also clearly illustrated by 'Wavegarden', a patented hydraulic system to generate high-quality waves in artificial lagoons - it was created by a local start-up, supported by Basque innovation policy funds and developed in collaboration with Basque and German research institutes. As explained by the company's business director (interview (9)),

(...) This is the largest artificial wave in the world (...); it required [knowledge] input from physics, fluid dynamics, biomechanics, energy efficiency (...). We can [now] control most of the variables that affect surfing and create different hydrodynamic profiles, and waves of multiple sizes and lengths, depending on the size of the lagoon (...).

Together with firms and knowledge institutes, users are also closely involved in surfrelated innovation, not only as 'smart neighbours' but also as testers and co-developers. On the one hand, founders, managers and employees of surf-related companies in San Sebastian are surfers themselves, thus prone to propose related innovations and evaluate whether new products are true improvements. On the other hand, surf companies actively engage with leading surf professionals and enthusiasts to co-develop and test innovations in early stages. For example, PUKAS has long been working with professional surfers from San Sebastian and all around the world, in order to co-design state-of-the-art surfboards together with their in-house shapers. Moreover, enthusiast engagement from local surfers is increasingly promoted. For example, three local surfboard manufacturers teamed up with Basque research institutes and the local government to launch a 'Surf Design Competition' in which university students - often also enthusiastic surfers - propose new product concepts to be further developed in-company. Recent examples include the design, prototyping and patenting of new surf goggles and 'smart boards', the latter with embedded sensors and microchips, tracking systems, built-in engines, among other technical functionalities (interview (17-19)).

Yet, in order to communicate the technical qualities of their products, surf companies in San Sebastian do not (primarily) refer to their territorial roots. Instead, patents, trademarks and logos play an important role, intermediating between producers and globally spread consumers. For example, beyond holding several patents, Wavegarden was also registered as an international trademark for 'Wave Generating Machines'. Another example is the 'European Surf' logo, which is attributed to every surfboard produced in PUKAS's factory (OLATU, meaning wave in Basque), guaranteeing that surfboards have been produced under strict safety and quality standards, using state-of-the-art production techniques and materials. Because of this, other high-end Australian and Californian brands manufacture their boards under license in OLATU to benefit from the logo and the factory's distinctive technical quality. These features and production processes are explicitly communicated by the licensed brands, as illustrated by LOST surfboards, a leading Australian surfboard brand:

[In LOST RV 5'7'] we also shallowed the vee up front (for more trim speed and instant burst in the take off) and deepened the vee under the rear foot. We did this for a more solid and forgiving, (...) controlled feel in turns and carves. Using the FUTURE FIN SYSTEM as standard, LOST surfboards are made in the OLATU factory in Northern Spain along with Al Merrick and PUKAS surfboards, Quality Guaranteed. (The Board Barn, 2015)

From a territorial perspective, the aforementioned valuation dynamics strongly rely on the exchange and recombination of complex knowledge pieces in a local milieu, as portrayed by territorial innovation models. As seen, multiple local companies, knowledge institutes, government organizations and users are actively involved. Yet, several external-to-theregion actors contribute to it as well. Apart from partnerships with foreign knowledge institutes (e.g. in Wavegarden) and material suppliers, leading global surfers and international shapers are the most preeminent examples. For example, the OLATU factory claims to be a surfers' melting pot, having built its '(...) reputation for making quality high-performance surfboards and custom bikinis [by] mixing a global view and a local knowledge, [namely through temporarily] hosting the very best of international surfboard builders' (Olatusurf, 2016, emphasis added).

All in all, many surf products and innovations originating in San Sebastian acquire value by being technically superior and allowing users to do different/better things. Value co-creation increasingly relies on stretched connections between production and consumption systems and on devices that validate technical qualities; moreover, physical and relational proximity in the local milieu plays a key role. Yet, as explored in the next points, other modes of experiential and identity-driven valuation are becoming increasingly important in San Sebastian's surf economy, both per se and by intersecting with the technical valuation dynamics of many of the aforementioned products and innovations.

4.2. Experiential valuation

Besides commercializing technically superior products, an important segment of San Sebastian's surf economy directly relies on experiential valuation: surf-related tourism, leisure and associated activities (e.g. surf schooling, accommodation). Yet, 'memorable' surf tourism experiences in San Sebastian do not seem to rely on the objective quality of its waves alone. Actually, according to a recent user's survey (Fomento San Sebastian, 2012), although the overall value of the surf-related offer in San Sebastian ranks the highest vis-à-vis other locations in Spain, France and Portugal, the wave quality in San Sebastian ranks lower compared to other nearby surf sites such as Mundaka, Hossegor, Biarritz and other beaches in Portugal and Cantabria (Figure 1). This suggests that surfing in San Sebastian is more than a one-dimensional act of riding waves. It is part of a larger experience inextricably linked to other unique historical, cultural and material features of the 'stage', collectively co-constructed by many loosely articulated actors, including media and event organizers.

On the one hand, notwithstanding the overall mainstreaming of surfing consumption (Section 3.1), San Sebastian's surf scene has long been associated with the 'original' surf values of independence, adventure, freedom and rebellion. Many of these values resonate with the Basque identity, namely seen from the light of its independence and nationalist struggle vis-à-vis 'Madrid' (Núñez, 1997). The values of a number of local heroes and pioneers (e.g. the Arteche brothers) and other visionary surfers who built the first surfboards in the 1960s challenged the establishment and held epic surf sessions became closely linked with the status and the (communicated) surf ambience of the city. These stories have been extensively promoted over time through books and specialized magazines (Gonfaus, 2006), but also celebrated in movies and in the marketing channels of local surfboard manufacturers. The way PUKAS introduces his founder Iñigo Letamendia is illustrative:

Being attracted to try the unknown, surfing in San Sebastian's La Concha [beach] on a borrowed surfboard at age 20 changed his life. (...). He joined three good friends to pursue a way of life that seemed a better choice: making surfboards. It was 1973, a time when Spanish dictator Franco was still ruling Spain, and where growing your hair, live in a hippy communa, party, do drugs and enjoy the shit out of your days was both fun and scary. (PUKAS, 2016)

San Sebastian's International Film Festival deliberately promotes these values as part of the culture and identity of surfing in the city. To do this, the festival organizers (also local surfers) deliberately combine big box movies with alternative, independent local productions in which the rebellious and 'grassroots' nature of San Sebastian's surfing scene is highlighted.

On the other hand, the local surfing experience has become closely linked with the city's cultural amenities and consumption opportunities. Apart from surf-specific accommodation, shopping and schooling, San Sebastian offers a distinctive variety of food options and cultural possibilities for a surf city. As stressed by interviewee (3), 'many of the surfers that visit San Sebastian are not the old outlaws anymore. They like good food and visit museums (...); they come with family and kids, who can find a lot to do while their partner is surfing'. These holistic features of the local surf experience are strongly promoted and widely communicated by the Local Economic Agency -Fomento San Sebastian (interview (1), (5)). On top of that, Fomento launched a cluster policy ('San Sebastian Surf cluster') whose initiatives include incentives to local surfrelated companies (e.g. surf shops, surf schools, hotels) to develop joint surf tourism products (interview (13), (14)); moreover, Fomento mediates between local surf schools to develop crowd management policies that improve the quality of the surf experience for locals and for tourists (interview (11), (12)).

The holistic and urban dimensions of San Sebastian's co-constructed surf 'stage' have been highlighted in several forums and media channels (e.g. National Geographic's 'world's best surf towns'). For example, a representative of an Australian surf magazine, visiting the city's surf film festival, wrote that:

(...) There are few coastlines as majestic and eccentric as that which wraps around the city of San Sebastian (...). Beachfronts lined with classical European architecture. A world-class museum tucked inside one headland. And the ramshackle former residence of an artist and surfer squatting movement inside another. It is a rare place where the sophistication of a famous city intersects with surf culture, and the results are fascinating. (Smith, 2015)

Hence, from a geographical perspective, the value of a surf experience in San Sebastian is clearly very much inseparable from its spatial context, and multiple actors and intermediaries play a role co-constructing it, both locally and through globally distributed influence and communication networks. Moreover, some local producers actively try to attach value to their (moveable) surf technologies by embedding them with experiential value. This is the case of the artificial wave system Wavegarden (Section 4.1). As explained (interview (9)),

(...) We hired three architects to work on the landscape design of the places where the wave is going to be installed. The idea is to deliver a turnkey leisure package and a unique experience; that is, the wave plus the land use and the services around it, such as a surf shop, a

training centre, etc. (...) San Sebastian is inspirational in observing how all these activities are developing and connect with one another.

4.3. Identity valuation

Besides technical and experiential valuation, a relevant part of San Sebastian's surf economy and innovation – as well as its competitiveness vis-à-vis other locations and production systems – increasingly relies on identity-driven valuation. In reality, local surf producers are often not (only) anonymous technology providers or experience stagers: they have a recognizable status that must be constantly evaluated and legitimized by consumers. In this sense, producers face a permanent strategic challenge to align their offers with changing consumer identities, lifestyles and values, distinguishing them from the others. Surfboards and apparel are paradigmatic in this respect. As explained by one interviewee, 'surfboards are objects full of magic, [in which] there is a permanent battle between innovation and tradition' (interview (12)); because of this, local producers have been doing strategic efforts to marry technological progress with the original surfing roots and surf community's identity, mobilizing San Sebastian's cultural assets in that process.

PUKAS, as the leading local surf company, has been doing this in many different ways. First, as illustrated in the previous Section (4.2), the company deliberately cultivates their brand by linking to the original surf values; to do so, the company exalts the deeds of their founders and establishes associations with San Sebastian as a distinctive surf location. Second, many local surfboard companies establish explicit associations with the 'heroes of the trade', that is, 'the guys that actually surf' (interview (14)) such as leading local surfers, top contesters in world surf tournaments and other legendary names; some factories – like OLATU – take pride in hosting the leading surfboard shapers from different parts of the world. As explored in Section 4.1, these practices have technical valuation rationales; yet, they also deliberately look to legitimate locally produced surfboards as authentic and embedded with 'real' surf identity, which become more powerful as they become legitimated by leading specialized media. For examples, PUKAS strategically highlights that

We kept bringing the very best of the international field of shapers, glassers and sanders, the only way to manufacture state of the art surfboards. Since then, and without touching the core and essence of our beginnings (...), [a] tremendous amount of amazing people had been key to the success of the factory, a leading club of surfboard lovers'. [For example, the shaper] Peter Daniels [is considered the] John Wayne of the shaping room; in 1976 [he] was featured in the cover of 'SURFER' [magazine]. (PUKAS, 2016, emphases added)

Third, and also in order to strengthen identity-driven linkages between production and consumption systems, PUKAS closely engages with surf audiences by sponsoring events such as international surf contests hosted in San Sebastian, the city's surf film festival, as well as individual surfers running the World Surf League. Finally, apart from initiating new surfers through their own surf schools, PUKAS has been concerned with maintaining a close influence in the identity of San Sebastian as a surf location. For this reason, as explained by a local policymaker ((15)), the company initially reacted with suspicion when invited by the Municipality to take part in local 'surf cluster' meetings, and called for a 'special status' in the initiative – namely due to their longstanding relevance in the local industry and legitimated 'caretaker' of the original surf values.

Other companies have been relocating their operations to San Sebastian to attach their products to the place's surf identity and appeal to consumers. One example is a high-tech company from the neighbour region of Navarra (see Figure 1), specialized in new technologies for the ski and surf industries. As explained (interview (6)), being present in San Sebastian has not a technology or commercial rationale but helps associate the brand with the local surfing community and better understand their values; for these reasons, the company actively participates in meetings of the 'surf cluster' initiative, even though no concrete projects and product development partnerships are explicitly foreseen. Beyond technology, leading global brands have been following similar practices of strategic attachment to San Sebastian's surf players and their 'original' surf values, which they implicitly legitimize. For example, Vans - a Californian shoe manufacturing company associated with surf and skate - has designed in 2009 a joint collection in collaboration with PUKAS, suggesting that

(...) both brands have been in the surfing industry since the very beginning without losing the core and they continue more alive and fresh than ever. (Surfers Village, 2016)

Also Billabong, a world leading (yet financially troubled) Australian surf corporation has designed a joint surf wear collection with PUKAS (Billabong X PUKAS 2013), with an eye not to any sort of technical or design superiority but to (re-) attach their brand with original surf values and identity. Billabong strategically positioned this collection as

Mirror[ing] the two companies' passion for surf (...). The notoriety of PUKAS is built on its family tradition, the passion for surf and the desire to overtake the limits of the sport. Billabong shares the same values (...). This collection is inspired on the legendary surf events 'Surf Pro PUKAS', organized in the Basque Country in the 1980s and 1990s. (Melty Fashion, 2013)

From a geographical perspective, identity valuation processes around San Sebastian's surf products have a clear place-based dimension: stories, tradition, cultural and experiential features of the place are mobilized by local producers to embed surf products with identity. Yet, as suggested, identity valuation processes for San Sebastian's surf products have been running through other spatial circuits as well. One important temporary valuation arena is the surf competition, organized in different world locations, in which surfers showcase their sponsors and their boards, gaining media attention. Moreover, virtual platforms and online forums (e.g. of specialized surf magazines) play a role connecting placebased producers with distributed communities of aficionados and consumers. Finally, as illustrated by the OLATU factory, spatial mobility of surfers and shapers largely influences the geography of (surfboards) valuation, coupling local surf values with the values of a globally distributed surf community. As expressed in the website of PUKAS (2016),

[OLATU] becomes a major platform for a bunch of the world's best shapers (...). Pukas was home to surfers and working with surfboards became encouraging and transmitted a feeling of pride to the entire team. Over the years the list grew with shapers (...), sanders, glassers and profiles of all kinds (...). Hard to understand what was going on if you didn't speak English.

In this sense, the factory became an important hub holding down globally distributed circuits of surf product's valuation, anchored in San Sebastiańs, identity-strong surf milieu.

5. Conclusions

Traditionally, economic geography has focused on the organizational architectures of territorial innovation models and their abilities to improve technical functionalities of products; markets in this research tradition were conceived as simple means of selling products composed at the terminus of the value chain. By conceptualizing markets as the locus where producers and consumers negotiate the value of products, this paper shifts markets centre stage. It focused on exploring 'how' and 'where' products and innovations are gaining 'economic significance' in the contemporary economy, highlighting that the economic value of many products is not formed within production systems alone, but relies on co-constructed connections between production and consumption systems, playing out across multiple geographies and being championed by several types of actors and intermediaries (e.g. specialized media, event organizers) that have been so far hidden in many analyses of territorial economic dynamics – notwithstanding the increasing attention paid to symbolism and aesthetics in contemporary territorial innovation approaches (e.g. Asheim et al., 2007).

Moreover, it was argued that technical (as in territorial innovation models) and experiential (as in the literature on the experience economy) modes of valuation do not exhaust the channels through which products and innovations acquire value. Building on the quality convention of authenticity (Jeannerat, 2013), identity-based valuation was put forward as a 'meta' valuation mode bringing together technical and experiential modes and in which economic value primarily derives from consumers' appreciation of the values and ideals that a product embodies or signals. As the case of the surf economy in San Sebastian illustrates, identity valuation relies on the co-creation of stories based on historical and cultural features of places, linked with (and based on) the values of communities and (surf) tribes. For example, surf brands strive to co-construct 'realness' and escape commodification by referring to the place's history and by using role models (star surfers) to link the past to the future; by doing so, they strategically reaffirm existing reputations and images, but also reinterpret them and create meanings that appeal to other consumer segments as well.

This perspective and empirical findings provide a new viewpoint to understand the competitiveness and renewal of surf clusters in a changing global industry, moving beyond techno-productivist, supply-focused approaches (Logue et al., 2015). However, it has also broader implications for our understanding of the development of local and regional economies in general.

First, the competitive advantage of places does not depend on having strong knowledge production and innovation milieus only; cities and regions also gain when they become sites of valuation and intermediation between production and consumption systems. Namely in Europe, many clusters and small production systems initially based on crafts and production abilities may be moving towards other forms of value co-construction. This allows them to keep an edge while others decline. This is not to say that valuation is a regionally delimitated process; as shown in this paper and in recent studies, it runs through nuanced spatial circuits, in multi-local configurations (Crevoisier, 2016; Jeannerat & Kebir, 2016; Pike, 2015). Yet, specific sites and places do play an essential role pinning down and nurturing the technical, cultural, experiential and symbolic resources behind the valuation processes that bring distinctive advantages to their economies.

From a policy perspective, a corollary from the previous is that by focusing too much on knowledge and innovation issues and the on the industrial-production side, cluster and other types of innovation policies are likely to overlook other sources of value creation and distinctiveness of urban and regional economies. As the case of San Sebastian illustrates, new types of initiatives may be required that closely involve users and consumer communities, manage cultural resources and connect policy domains (destination management, tourism, cultural and economic development) in new ways. This is an additional challenge for the design of 'smart specialisation' strategies in Europe (Foray, 2014; Morgan, 2017). In many (e.g. Southern) European regions, these dimensions are at the core of many places' competitive advantage, but economic strategies are frequently technology oriented - a legacy of regional economic policy grounded on territorial innovation models. Smart specialization strategies may need to expand the scope of search, and include unusual domains and new types of actors - e.g. event organizers, destination managers, communities of users and citizens and local governments. Naturally, this raises additional coordination challenges but heightens the chances of effectively tapping the valuation potentials of many cities and regions in the contemporary economy.

Second, a valuation approach provides a new viewpoint to theories that explain urban and regional economic renewal through the recombination of activities and industries that share related technology and skills' portfolios (Boschma, 2017; Jacobs, 1969). As shown in San Sebastian, the renewal of the surf economy has been associated with new combinations of activities that, in many cases, show little (if any) technological relatedness per se, but are closely connected by cultures and ideals, generating value to one another. In line with recent research by Storper et al. (2015), the crossfertilization between different cultures and communities in San Sebastian - rebellious countercultural movements, technical skills and surf culture - led to the formation of a rather unique milieu, with notorious influence in the spinning out, anchoring and valuation of surf production and innovation over time. This is a plea to consider complementary approaches to relatedness beyond skills-technology (Boschma, 2017) and look into regional diversification through the lens of their product's valuation dynamics.

Despite the recent interest, the conceptualization of valuation perspectives to understand urban and regional economic development is still in its infancy. Further research might benefit from considering complementary analytical lenses to analyse valuation e.g. focusing on the role of productive clashes and dissonance (Stark, 2011) or the political geographies of brands and association (Pike, 2015). Moreover, future research in this domain might study a wider variety of industries and innovations (e.g. that combine technological dimensions with symbolic content), or different geographical-organizational settings (e.g. beyond single places, analysing valuation processes in the interplay between places and globalized production networks and consumption communities). Finally, research should focus on the policies and policy learning dynamics that a valuation approach requires. As demand is recognized as an endogenous force pushing innovations and co-creating value, an open question is how can urban and regional policymakers harness the power of networks of consumers that interact with and influence the fate of a place's production systems.

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