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Third-party impacts of short-term rental accommodation: a community survey to inform government responses

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ABSTRACT

Short-term rental accommodation (STRA) sharing economy platforms, such as Airbnb, give rise to externalities or negative third-party impacts in neighbourhoods. Governments worldwide continue to grapple with how to best regulate STRA platforms given such externalities, especially in the wake of COVID-19. When STRA is perceived as poorly controlled, anecdotal reports indicate that community resentment around perceived inequities and negative economic, social, and environmental impacts rise. However, little research has systematically investigated community perceptions of STRA, notably Airbnb effects at a local, non-metropolitan level, as well as preferred regulatory responses. This paper examines such community perceptions in one of Australia's top tourism destinations, the Byron Shire. An online survey of 819 residents, identified four positive, eight negative and seven mixed impacts of Airbnb on community. To redress the adverse effects and enhance the sustainable performance of STRA (including Airbnb), a majority of residents favoured several regulatory strategies such as mandatory on-site management of STRA properties and better avenues to report complaints of misconduct. However, with notable reported differences between host and non-host residents. The study thus offers possible regulatory options to support regionally-based local councils as they seek to address opposing community concerns.

ARTICLE HISTORY

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KEYWORDS

Airbnb regulation; sharing economy externalities; impact perceptions; local government; Short-term Rental Accommodation; sustainable development goals

Introduction

Under a broad umbrella, multiple concepts describe the sharing economy (SE), which provides opportunities to participants in terms of generating flexibility, match-making, extending reach, managing transactions, trust-building and facilitating collectivity (Sutherland & Jarrahi, 2018). The rapid digitising of global economies through mobile technology, the internet, and the cloud has given rise to a for-profit, data-centric platform - a business model bringing different groups together (Srnicek, 2017). Gössling and Hall (2019) make a point of distinguishing between the sharing and collaborative economy: "Sharing refers to predominately private, and often non-commercial transactions, while the collaborative economy focuses on mediating commercial business-to-peer exchanges, virtually always involving platforms owned by global corporations" (p. 76). Sometimes both traditional and for-profit SE models are considered jointly, or the

distinction between them is becoming increasingly blurred, and the term 'hybrid' is applied (Dolnicar, 2019; Sundararajan, 2016). As a result, the joint framing of the 'real' sharing economy and the 'commercial' collaborative economy may distort perceptions of the actual contributions of each to sustainable tourism, and thus feed the political debate on how best to regulate the SF.

Some of the best-known forms of the collaborative economy are home-sharing platforms, actively promoting narratives relating to the traditional notion of sharing, human connection, nonprofit or profit-sharing, and the smarter use of underutilised houses/assets. Notably, Airbnb's role in unlocking latent rental value in private homes (Sundararajan, 2016) has assisted in it becoming the world's most successful and popular home-sharing platform. Yet some hosts pursue high profit through a transformation of housing into tourist accommodation (Oskam, 2019). Thus, most accommodation platforms no longer align with the original notion of the sharing economy (Gössling & Hall, 2019). According to Kenney and Zysman (2018), Airbnb's home-sharing model of brokering the renting of rooms does not comport with the ordinary meaning of sharing. Srnicek (2017) attributes the expansionary nature of platforms such as Airbnb to their growing appetite for data and the ultimate goal of "gaining absolute dominance over its core business area" (p. 256). Airbnb involves a variety of housing micro-practices including drawing upon small individual housing assets to generate wealth for the company, and the micro-entrepreneurial Airbnb hosts through outsourcing to hosts the property cleaning and insurance costs and paying employees minimum wage (Sundararajan, 2016). However, this promotes an entirely new set of housingrelated applications (Stabrowski, 2017). Oskam (2019) calls out Airbnb's lack of transparency. He states their disguise of sharing rather than renting is an intentional strategy of entering in "conflict with local attempts to establish housing policies and to regulate commercial activities" (p. 19).

In acknowledgement to the vexed issues, this paper places an individual 'local community' within a non-metropolitan context at the forefront of a two-pronged investigation to determine Airbnb's externalities. The case community is the Byron Shire, a regional tourism hotspot in Australia. Following Alyakoob and Rahman (2019), the study adopts a sustainability lens capturing economic, social and environmental aspects to help paint a fuller picture. Given the disruptive, dynamic and fast-evolving nature of the sharing/collaborative economy and their supporting platforms, a more robust evidence base with cross-sectional snapshots of specific contexts is needed (Gurran & Phibbs, 2017). The first aim of this paper, therefore, is to examine the positive and negative spillover impacts of Airbnb felt by members of a non-metropolitan community. The second aim is to investigate community members' perceptions of appropriate government regulation of STRA in their region to address the negative spillover impacts.

Participation in the SE "has real effects in multiple places on users, workers, competing producers, the communities within which sharing occurs, and the range of resources that must be consumed in order to enable such services" (Gössling & Hall, 2019, p. 82). Economists refer to these unaccounted consequences for others as a result of SE participants' as externalities or spillovers (Sundararajan, 2016). Externalities, often manifesting as negative impacts, typically trigger some form of regulation. In the case of sharing platform firms, Srnicek (2017) attributes their success to them having leapt ahead of rules. Similarly, after studying the evolving regulation of Airbnb in New York, Sundararajan (2016) concludes that most micro-entrepreneurial Airbnb hosts would not pursue their small business ideas in the presence of a stricter code. He subsequently raises the tricky question of how to create a robust regulatory infrastructure for diverse sharing economy models in a way that preserves individual freedom, provides consumer safety, prevents the minority spoiling it for the majority and avoids an unnecessary bureaucratic burden. In this light, contemporary research primarily focuses on major cities. Within the metropolis, there is growing concern over externalities - 'touristification' or the transformation of residential neighbourhoods to tourism precincts (Sequera & Nofre, 2018). Such developments drive 'gentrification' as housing markets pressurise when permanent homes convert for tourism use (Wachsmuth & Weisler, 2018) further highlighting the socioeconomic issue of reduced availability of affordable housing (Crommelin et al., 2018; Lee, 2016).

However, in non-metropolitan tourism destinations, the dearth of research into communityperceived impacts of the SE is especially acute. Noted exceptions in the Australian context are Gurran et al. (2020) and Grimmer and Vorobjovas-Pinta (2020). The former highlights Airbnb's profile across 12 coastal case-study communities in four Australian states. It finds that Airbnb style platforms intersect with, and impact, local governance, neighbourhoods and housing markets in different ways, a position they conceptualise as ranging from 'pop-up' to 'invasive' tourism. The latter, considering Airbnb from a single but whole of State level, recognises its polarising effect on the Tasmanian community. Some champion the home-sharing behemoth and commend its positive impact in promoting tourism in regional areas. Others criticise Airbnb for driving up house prices, reducing available housing stock for rent, and contributing to the displacement of long-term tenants from rental properties. In the European context, Domènech and Zoğal (2020) report on the spatial distribution of Airbnb supply and its potential effects on mountainous destinations. Each study concludes that universal approaches to regulation are not appropriate. Legislators must reflect upon the differences between towns, cities and regions, and take into consideration individual socio-economic status indicators when assessing the sustainability of tourism development, and subsequent policy-making.

First, we recap the literature on Airbnb's economic, social and environmental impacts on the community. As Airbnb's negative impacts may be regarded as market failure, economic theory around addressing them through regulation are discussed. The Byron Shire context is introduced, the study's methodology outlined, with findings presented and discussed. Finally, conclusions are drawn.

Economic, social and environmental impacts of sharing economy

The United Nations' (2018) sustainable development goal (SDG) 11, advocates for cities and human settlements to be inclusive, safe, resilient and sustainable. The SDGs focus on the triple bottom line framework of sustainability with its three equally important pillars of sustainability – economic viability, ecological preservation and societal wellbeing (Mawhinney, 2002). They also align with Krippendorf's (1987) vision for a new form of tourism that "will bring the greatest possible benefit to all the participants – travellers, the host population and the tourist business, without causing intolerable ecological and social damage" (p. 106).

While the SE posits to contribute to sustainable tourism and the achievement of SDGs, a range of impacts or unintended consequences have arisen from the evolution in P2P sharing, particularly the exponential growth in the STRA sector (Cheng et al., 2020). Such effects make the SE less sustainable and often generate a 'tourismphobia' (Milano et al., 2019), spawning antitourism movements a growing phenomenon worldwide (United Nations, 2018). Through the web-facilitated STRA sector, often called short-term holiday letting (STHL) platforms, tourism has encroached on residential areas. Such intrusion is perceived to bring along with it, increased noise levels and at times anti-social behaviour, both generic traits associated with overtourism. This term describes destinations where hosts or guests, locals or visitors, feel that there are too many visitors and that the quality of life in the area or the quality of the experience has deteriorated unacceptably (Capocchi et al., 2019).

The literature (summarised in Table 1) identifies a range of positive and negative effects across the three pillars of sustainability (economic, social and environmental) for five key stakeholder groupings: Airbnb host residents (AHR), Airbnb visitors (AV), non-Airbnb host residents (NAHR), Approved accommodation providers (AAP), and Local government (LG) (Caldicott et al., 2020). While many of the positive and negative indicators impact all five stakeholder groups, the negative economic, social and environmental impacts may be more severe and felt more acutely by NAHRs, AAPs and LGs. Bivens (2019) arrives at a similar conclusion in his assessment of the economic costs and benefits of Airbnb expansion.

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AHR (Airbnb host resident); AV (Airbnb visitor); NAHR (non-Airbnb host resident); AAP (traditional accommodation provider); Local government (LG), SE (Sharing Economy). Source: (Caldicott et al., 2020).

Table 2. Classification of regulation type for Airbnb.

Self-regulation (Laissez-faire)	Semi-interventionist or co-regulation	Government regulation (including prohibition)
Raising awareness via communication campaigns	Incentives for improved performance	Defining & enforcing property rights (e.g. parking, registration of activity)
Airbnb guest reviews	Subsidies and taxes (e.g. bed tax)	Enforcing regulatory constraint with penalties for non-compliance (e.g. noise)
Owners corporations	Price & quantity controls (e.g. day caps) Creating institutions that reduce transaction costs involved in parties negotiating solutions to externality problems (e.g. Airbnb collecting taxes)	

Source: Nieuwland & van Melik, 2020.

Despite the spate of recent investigation, empirical research into the community context of Airbnb remains sparse, especially in the specific context of impacts to regional destinations. Discussion of sustainable tourism often ignore communities' perceptions of the effects, and it may be a challenge to find common ground amongst different community stakeholders (Hardy & Pearson, 2016).

Regulation to address negative impacts (externalities) of sharing economy

Jurisdictions require an understanding of regulatory models to address when commercial practice outpaces government policy/intervention. While informal regulation and self-regulation offer the most autonomy to industry, highly prescriptive standards to which the regulated party must comply, curtail independence. Variation from the latter command approach may cause the regulated party to suffer penalties (the control). Semi-interventionist, in-between forms involve flexible regulatory incentives for improved performance or economic regulation in the form of incentive-based instruments (e.g. taxes and subsidies) and market-based instruments (i.e. price and quantity controls) (Hemphill, 2003). The middle ground represents a co-regulatory space, where the regulator and the regulated parties collaborate in determining and achieving regulatory goals (Haines, 2006). Aside from government regulation, Sundararajan (2016) predicts an increase of regulation across three new models - peer regulation (e.g. Airbnb guest reviews), self-regulatory organisation (e.g. by owners' corporations) and delegated regulation through data (e.g. Airbnb collecting tax data).

These three basic positions align roughly with the three main options to regulate Airbnb discussed by (Nieuwland & van Melik, 2020), namely laissez-faire, semi-interventionist or co-regulation, and prohibition (the most extreme form of regulation) – see Table 2.

Regulating STRA is a challenge, and no single regulatory approach can remove the gap between regulatory expectation and the behaviour of the regulated organisation (Nieuwland & van Melik, 2020). Therefore, an appropriate mix of government regulation, co-regulation and self-regulation is required for the given set of circumstances (Gunningham, 2004).

There is no federal regulation of STRA in Australia. Instead, each of the six states has the freedom to develop their regulatory approach. Only Tasmania has enacted a state-wide statute for STRA through its Short Stay Accommodation Act 2019, which mandates registration of all STRAs. In New South Wales (NSW), Strata and tenancy laws changed in April 2020 concerning STRA. Changes to the Strata Schemes Management Act allow owners cooperation to adopt by-laws that limit STRA in their strata scheme. STRA laws, including a mandatory Code of Conduct, will apply from 18 December 2020 to impose new obligations on booking platforms, hosts, letting agents and guests. Changes to planning laws are due by mid-2021, including a new planning

Table 3. Snapshot of Byron Shire population, Visitor numbers and Accommodation listings.

	2008	2013	2016	2019
Population Byron Shire	30,347	31,609	33,400	34,574
Byron Bay	n/a	8,790	9,246	9,608
Total Visitors Numbers (in mil) ^a	1.29	1.26	1.88	2.21
Day visitors	0.6	0.6	0.91	0.99
Overnight Visitors	n/a	0.62	0.97	1.22
Visitor nights	n/a	2.94	4.04	5.50
Airbnb listings ^b				
Airbnb	n/a	n/a	1,172	3,513
Accommodation Audit listings ^c				
AAP ^d	106	n/a	n/a	81
Holiday Apartments ^e	615	n/a	n/a	671
Other ^f Other	400	n/a	n/a	2,573

^aVisitor Data from November each year, provided by Destination Byron (2019) and ASB 2020.

policy that applies consistent regulation of the use of premises for STRA across the whole state. A mandatory STRA premises online register is currently under development for commencement in mid-2021. Western Australia has drafted a state-wide approach to STRA regulation, and changes to the STRA laws are due to be implemented in 2021. Queensland and Victoria devolve the management of STRA to local councils. The sixth State, South Australia, is the most relaxed jurisdiction for share accommodation premised on STRA not constituting a material change in use, thereby negating the requirement for planning approval.

The Byron Shire, located in the Northern Rivers region on the far north coast of NSW, is the focal context of the study reported in this paper and described next.

The case study - Byron Shire

About the Byron Shire

The Shire which had a population of around 34,500 in 2019, with 9,600 residents in Byron Bay, is famous as a coastal tourist destination. Tourism is the leading industry contributing A\$883M to the local economy in 2019 (Byron Shire Council, 2020b) with visitor numbers steadily increasing over the last eleven years (2008 to 2019) - see Table 3. Visitor arrivals of over 2.2 million from July 2018 to June 2019 total 4.73 million nights with the majority of these visitors staying overnight in Byron Bay (Destination Byron 2019) outnumbering residents by a ratio of around 220 to 1. Table 3 also captures the significant increase in STRA numbers in the Shire over the last decade, as well as the decline in the number of approved accommodation providers from 2008 to 2019 (Byron Shire Council 2020a).

Today, the township Byron Bay is one of the most expensive real estate markets in Australia. The median house price in August 2020 was \$1,450,000 (compared to \$550,000 in 2012), and the median rent was \$770 per week. Both prices more than doubled over the last ten years (realestate.com 2020). The growth is problematic, given Byron's specific demographic. Byron suffers from higher rates of underemployment, a higher proportion of single-parent families, lowerincome levels, and higher housing stress compared to other areas in NSW (Gurran et al., 2020). Of particular note is the conversion of long-term rental properties, namely apartments and houses, to STRA, listed on multiple booking platforms.

Consequently, Byron Shire is also one of Australia's least affordable regional rental-housing markets (allhomes.com.au 2020). In 2019, approximately 25 per cent of properties in the Shire

^bSource: Inside Airbnb November 2019. Inside Airbnb provides data solely on Airbnb property listings with those for the Northern Rivers region available at http://insideairbnb.com/northern-rivers/. The disclaimers offer more information on the methodology.

^cByron Shire Council Accommodation Audit (Note - Data collected in 2008 and January 2019 only).

^dApproved accommodation providers - Hostels, Caravan Camping, Guest Houses, Hotels/Motels, & Resorts.

eHoliday apartments, unknown if operated by an AAP or as STRA.

fincluding Holiday Houses, Private/Home Stays (the majority of 2019 listing registered on the Airbnb platform).

were listed as STRA, predominantly on the online rental platform, Airbnb followed by Homeaway (former Stayz). Byron Bay township hosts over half of the Shire's STRA properties, comprising up to 62% of the total dwelling supply (Byron Shire Council 2020b).

STRA regulations in Byron Shire

When Airbnb commenced operation in the Shire around 2011, the Council had already introduced specific regulation for STRA, such as an urban holiday letting precinct model in 2008 to prohibit STRA in some residential areas of Byron Bay. As listings started to grow, the Council drafted an STRA Action Plan in 2014, in alignment with their Local Environment Plan 2014, prohibiting tourist and visitor accommodations in residential zones. The use of a dwelling for STRA for tourist and visitor accommodation raises legal issues for many residences knowingly used as STRA (Byron Shire Council 2020b). A local organisation representing AAPs has lobbied the NSW Government to allow regional councils to enforce stricter rules around STRAs. They suggest a limit of 30-60 nights of the year for people renting out houses or rooms, instead of the government proposed 180-365 nights (Morrow, 2018).

The present NSW government proposed day cap for hosted and non-hosted properties (NSW Government, 2019), is much higher than most Shire residents can tolerate – a position that the Council has repeatedly put the government. However, the NSW government has rejected the Council's initiatives in the past, leaving it in a 'wait-and-see' space in anticipation of a yet unscheduled, State proposal for STRA regulation. In a turn-around, in March 2019, the Council received an invitation to prepare and submit a planning proposal to the NSW government that could introduce a 90-day threshold in the most impacted towns of the Byron Shire. This document went to the State government in March 2020 (Byron Shire Council 2020a) eliciting a Departmental response for Council to provide further economic analyses, though with insufficient details to the scope.

Subsequently, in the absence of coherent STRA regulation, there are palpable tensions between different stakeholder groups. First, most Shire residents do not share the NSW government's goal of almost doubling overnight visitor expenditure in the state by 2030 (Byron Shire Council 2020a). Second, because the State government considers local infrastructure and amenity issues relating to the tourism impacts to be chiefly the responsibility of local government (ABC North Coast 2017), many residents feel unjustly burdened by tourism externalities. They pay higher water and sewerage rates to help finance the infrastructure costs associated with high visitor numbers. The Shire Mayor publicly expressed his concerns: "The proliferation of unauthorised short-term holiday accommodation is threatening the fabric of our community. In some areas, it is getting to the point where long-term residents do not know anyone in their street anymore" (Poate, 2018, p. 1). Mindful of community feeling over STRA impacts, not just in Byron Shire but across many council areas of Australia, and indeed globally, this research systematically captures residents' views. First, regarding the positive and negative spillover impacts of Airbnb specifically; and secondly, regarding appropriate government regulation of STRA for their region, more generally.

Policymakers must have current, comprehensive, valid, reliable, and evidence-based information to inform sustainable tourism practices. Given the proliferation of Airbnb within Byron Shire, this research focus aligns to that platform.

Methodology

Guided by the literature (see Caldicott et al., 2020) and in-depth key informant interviews, an informed survey instrument was developed, which contained questions relating to the following:

• Respondent status - Airbnb host and Other residents. ('Other residents', for this paper, is a label given to respondents, who are not Airbnb hosts)



- Perceived positive and negative social, economic and ecological impacts of Airbnb lettings, i.e. on housing and accommodation, local businesses, tax revenues, visitor numbers, infrastructure and neighbourhoods across the Shire
- Perceived importance of information needs about various aspects related to Airbnb
- Preferences for measures to improve regulation of the STRA sector (including Airbnb)
- Preferences for rental caps (day limits) on STRA.

All perceptions and preferences were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The survey instrument underwent pre-testing within the research team, selected academic staff, and relevant staff within the Byron Shire Council.

The research team reached out to the entire adult Byron Shire population to participate in the survey, which was openly accessible for two months. The survey link was publicised in several ways to reach across all community stakeholders: through a team member giving interviews on four radio stations; articles published in four local newspapers; a media release through the University media office; repeated survey invitations through posts on the Facebook pages of twelve community groups; the Byron Shire Council Facebook page; invitation through newsletters to members of the Chamber of Commerce, two other business networks, and, one political party. Furthermore, flyers were displayed on notice boards and at weekly markets around the Shire. Given the positive response rate (n = 819) and the broad cross-section of stakeholder engagement, the sampling method proved useful in capturing adequate distribution. English literacy and web access, as well as Airbnb lobbying, were recognised as potential bias enablers (Andringa & Godfroid, 2020). However, the team did not observe any direct mobilisation of Airbnb hosts (Hibbing et al., 2014) during this study, as when Airbnb emailed hosts across NSW in December 2018, explicitly attacking, among others, Labor Party's planned holiday-lets controls (Lovejoy, 2018). Thus, the respondent mix suggests sufficiently distribution, notwithstanding the expected slight over-representation of Airbnb hosts as 1) they are 'direct-interest' parties; and 2) the high proportion of Airbnb properties within the Shire (approximately 62% of total properties).

The 1,017 survey responses resulted in a valid data sample of 819¹ after screening for incomplete submissions. Thus, the survey captured around 2.5 per cent of the Shire's population, including views of both Airbnb hosts and non-hosts. Most questions had relevance to all respondents though matters directly relating to the Airbnb' host-experience' were limited to the self-identified hosts towards the end of the survey. Reporting of the host-perceptions are beyond the scope of this paper.

The data was then subject to the following analyses: Descriptive analysis of residents' postcodes and length of living in the Shire; principal component analysis to explore the dimensionality of perceived impacts of Airbnb; and differential analyses, such as ANOVA; and cross-tabulations. The latter sought to explore how 1) respondents' postcodes and host status associate with perceived impacts of Airbnb, and 2) Airbnb host/non-host status was associated with preferred maximum short-term rental cap and preferences to regulate STRA.

The majority of survey respondents (55%) lived within the immediate surroundings of Byron Bay, which is the central tourist hub in the Shire, followed by 18% in Ocean Shores, 13% in Mullumbimby, and 8% in Bangalow and surroundings. The average length of respondent residency within the Shire was 19 years. Out of the 819 respondents, 67% (552) were owner-occupiers of properties, while 26% (215) rented their place of residence. Furthermore, 85% of all respondents said that they were aware of STRAs within 200 m of their home, with 75% saying that these STRAs were Airbnb listings. Of the 215 respondents (26%) in rented accommodation, almost half (90, 42%) had experienced requests to leave a previous rental. Fifty-eight, or 64% of those asked to leave, reported that they knew their rental property was about to be listed on Airbnb. Although the survey did not elicit for a 'how they knew' response, permanent residents replaced by the very temporary tourist dollar has long been a common dilemma for Byron Shire renters, even preceding Airbnb and especially leading up to holiday periods. Anglicare Australia is concerned that holiday letting is creating proxy resort towns in regional Australia and adding further stress to the housing crisis (Maunder et al., 2018; White, 2020).

Table 4. Positive impacts for the community.

		Mea	n		Overall agreeme	ent (%)
Airbnb leads to	Overall (n = 766)	Airbnb host (n = 151)	Non-host (n = 615)	Disagree*	Neither	Agree
Increases revenues for local businesses	3.71	4.24	3.57	11	25	64
2. Increased employment opportunities for locals	3.10	4.01	2.86	34	26	40
3. Greater variety of retail & leisure services	3.09	3.78	2.91	30	35	35
4. Increased local tax revenue	2.66	2.98	2.59	48	27	25

^{*}Disagree = includes groups Strongly disagree and Disagree; Neither = Neither Agree nor Disagree; Agree = includes groups Agree and Strongly Agree.

Findings

Perceived impacts of Airbnb

The seeming effects of Airbnb identified by the survey respondents fell into three categories: (1) impacts that are positive for the respondents' community; (2) those that are negative for the community; and (3) those that have mixed relations across the neighbourhood. The latter, and fresh addition to the impact literature, maybe favourable for *specific* community stakeholders, having no/negligible effect or perhaps a negative impact on *other* community members. For example, Airbnb leading to more visitors in a council area is generally beneficial for STRA hosts and business/tourism operators. It most likely has little impact on those people living away from the tourist hotspot. Notwithstanding, it may be unfavourable for some adjacent locals concerned about the loss of amenity or change in the culture of their neighbourhood.

Overall, the survey results report four significant positive impacts on the Byron Shire community and eight main adverse effects. Recognisably, Airbnb has a range of implications, which may be perceived similarly or differently by Airbnb hosts and Non-hosts (Other residents). When reviewing specific stakeholder responses (hosts vs non-hosts), the mixed impacts fall under seven indicators. The following discussion expands each category with the level of respondent agreement to various statements clustered as follows: Disagree = includes groups Strongly disagree and Disagree; Neither = Neither Agree nor Disagree; Agree = includes groups Agree and Strongly Agree.

Positive impacts of Airbnb

Table 4 presents four positive impacts of Airbnb on the community as perceived by Airbnb hosts and non-hosts alike. Ranked by mean in order of 'overall agreement' they are: increases revenues for business; increases employment; promote a greater variety of retail; and, increases local tax revenues. Airbnb hosts tend to see positive impacts more favourably than non-hosts. The views diverged most intensely for the impact 'leads to increased employment opportunities for locals'. Airbnb hosts tended to agree (mean 4.01), while non-Airbnb hosts tended to be neutral (neither agree nor disagree) (mean 2.86).

Negative impacts of Airbnb

Table 5 presents eight negative impacts of Airbnb on the community as perceived by Airbnb hosts and non-hosts alike. More than three-quarters of respondents agreed on the top two negative impacts of Airbnb – the reduction of affordable housing for residents and increased traffic and parking congestion. More than two-thirds of respondents agreed on the next three main negative impacts of Airbnb on the community. Airbnb leads to 1) increased waste management problems,



Table 5. Negative impacts for the community.

		Mean		Overall	agreement	t (%)
Airbnb	Overall (n = 766)	Airbnb host (n = 151)	Non-host (=615)	Disagree	Neither	Agree
Reduces the availability of affordable housing for residents	4.17	3.37	4.40	15	8	77
2. Increases traffic and parking congestion	4.07	3.13	4.33	16	9	75
3. Leads to increased waste management problems	3.97	3.15	4.20	14	14	72
Leads to extra costs to ratepayers to provide infrastructure	3.99	3.20	4.22	15	14	71
5. Leads to increased noise levels	3.98	3.03	4.24	15	15	70
Adversely affects the lifestyle of neighbourhood residents	3.97	2.89	4.27	19	12	69
7. Leads to the overuse of public facilities (e.g. toilets)	3.74	2.91	3.98	21	19	60
8. Leads to increased anti-social behaviour	3.55	2.56	3.82	24	22	54

Table 6. Mixed impacts of Airbnb.

		Mean		Overall	agreemen	t (%)
Airbnb	Overall (n = 766)	Airbnb Host (n = 151)	Non-host (n = 615)	Disagree	Neither	Agree
1. Provides income for Airbnb hosts	4.30	4.50	4.26	1	5	94
Leads to an increased number of visitors into the Byron Shire	4.21	3.99	4.28	6	10	84
3. Leads to an increased number of property investors	4.18	3.62	4.33	8	13	79
4. Offers more variety in accommodation for tourists	3.94	4.49	3.80	8	11	81
5. Increases the property prices	3.72	3.28	3.87	20	19	61
6. Enables Airbnb hosts to stay in their homes	3.38	4.17	3.18	21	32	47
7. Makes Byron Shire a more affordable tourist destination	2.81	3.61	2.61	45	20	35

2) extra costs to ratepayers to provide infrastructure, and 3) increased noise levels. Airbnb hosts tended to perceive all negative impacts less negatively than non-Airbnb hosts. The views diverged most intensely for the impact 'leads to anti-social behaviour'. Airbnb hosts tended to disagree (mean 2.56) with this statement, while non-Airbnb hosts tended to agree (mean 3.82) with it.

Mixed impacts (or broad consequences) of Airbnb

Airbnb has positive impacts on specific stakeholders but may have no/negligible or even a negative impact on other community members. Respondent perceptions of seven mixed impacts of Airbnb (ranked by mean) present within Table 6. The majority of respondents agreed that Airbnb has positive associations for the following specific stakeholders:

- For Airbnb hosts (AHs) in terms of income generation (94% agreed), and allowing AHs to stay in their home (47% agreed).
- For AHs, AAPs and other business operators in terms of bringing more visitors to the area (84% agreed).
- For tourists in terms of providing more variety of accommodation (81% agreed), and making the tourist destination more affordable (35% agreed).
- For property investors in terms of increasing the number of investable properties, thus property investors (79% agreed).
- For general property owners in terms of the increased property price (61%).

Notwithstanding these positive broad-stakeholder impacts, respondent expression of neutrality, or disadvantage to the same indicators for a minority of stakeholders (e.g. non-host residents), is acknowledged as important, though not widely reported. Subsequently, policy-making should consider all views.

Perceptions of a daily rental cap

Table 7 presents summaries of the duration for their preferred rental cap (day-limits) across two types of STRA property: (a) primary residence *with on-site management*; and (b) permanently non-hosted investment properties without on-site management.

Properties with on-site management

Among all five Byron Shire postcode groups, 37% of respondents felt that there should be no restrictions at all for properties *with on-site* management, meaning that these properties are available for let 365-days per year. Notably, 72% of all Airbnb hosts wanted no restrictions on such properties, compared to only 29% of non-Airbnb hosts. The majority of non-Airbnb hosts favoured a cap for *on-site* managed properties, with 31% favoured a maximum cap of 180-days on such STRA rentals, while 32% preferred a cap of less than 90-days.

Properties without on-site management

Among the five Byron Shire postcode groups, 39% of all respondents wanted 0-days rental (*full restrictions* = *no STRA rentals*) for properties *without on-site management*. Even 15% of Airbnb hosts wanted complete restrictions (0-days) for such properties although this was far less than the 45% of non-Airbnb hosts.

Perceptions on regulations of STRA in the Byron Shire

In recognition that Airbnb is not the only accommodation platform within the Byron Shire SE space, the survey presented nine options for regulating STRA (including Airbnb). A majority of respondents supported all nine ways of controlling STRA (see Table 8). Overwhelmingly, respondents asked for more robust avenues to report complaints of misconduct, while 84% requested appropriate enforcement of non-compliance. Overall, the Airbnb hosts appeared to demand less regulation of STRA.

Table 7. Differences regarding rental caps on STRA.

	365 days per year (No restriction)	Max. 180 days per year*	Less than 90 days per year	0 days (Not allowed at all)
A. With on-site management				
Airbnb hosts ($n = 151$)	72	17	11	1
% of Airbnb hosts				
Non- Airbnb hosts (n = 615)	29	31	32	8
% of Non-hosts				
Total (n = 766)	37	28	28	7
% of all respondents				
B. Without on-site management				
Airbnb hosts (n = 151)	38	26	21	15
% of Airbnb hosts				
Non- Airbnb hosts (n = 615)	11	15	29	45
% of Non-hosts				
Total (n = 766)	16	18	27	39
% of all respondents:				

^{*}Includes two groups: Max. 180 days per year and 90 < 179 days per year.

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		Mean			Overall agreement (%)	
STRA needs regulating in the following ways	Overall $(n = 766)$	Airbnb host $(n = 151)$	Non-host $(n = 615)$	Disagree	Neither	Agree
Adequate reporting avenues to lodge complaints of misconduct	4.51	4.02	4.63	8	7	91
Adequate enforcement of non-compliance	4.37	3.70	4.54	4	12	84
3. Compulsory public liability insurance to cover STRA guests and third parties for injury or damage	4.15	3.44	4.32	12	Ξ	77
4. A bed-tax or leay for any tourist accommodation (irrespective of the accommodation type)	4.10	3.49	4.25	15	10	75
5. Restrictions on Airbh properties without on- site management	4.06	3.08	4.30	17	8	75
6. Adequate provision of fair trade within the accommodation-provider sector	4.01	3.35	4.17	6	20	70
7. Implementation of a registration & permit system for STRA	3.99	3.01	4.24	17	8	74
8. Council-supported community advisory panel regarding STRA	3.94	3.10	4.15	13	16	71
9. Zoning restrictions for STRA in residential areas	3.86	2.73	4.14	22	10	89

Preferences for further information needs on Airbnb

As presented in Table 9, the majority of respondents within the Byron Shire agreed with the need for better public information on Airbnb-related issues, particularly impacts of Airbnb on the community's residential-rental accommodation and infrastructure.

Altogether, the differential analyses, such as ANOVA and cross-tabulations, found no difference across postcodes in perceived impacts of Airbnb and STRA regulation. However, respondents from one of the five-postcode areas (Clunes/Federal) registered a stronger desire for the implementation of a registration/permit system for STRA than residents in the other postcode areas. Regarding host status (Airbnb host and non-Airbnb host) significant differences are apparent between hosts and non-hosts were found on all items on perceived impacts of Airbnb and STRA regulation options. Airbnb-hosts tended to perceive all negative impacts less negatively and all positive impacts of Airbnb more positively than non-Airbnb hosts - a phenomenon common among stakeholders with differing financial interests (Sroypetch & Caldicott, 2018). Furthermore, Airbnb hosts tended to perceive the need for STRA regulation and information of Airbnb much less than the non-Airbnb host respondents.

Discussion

This paper purposely places the Byron Shire community residents at the forefront of an investigation of positive, negative, and mixed, triple bottom line impacts of Airbnb within the broader context of short-term rental accommodation.

The research highlights that the significant positive effects of Airbnb on the Byron Shire community perceived by most respondents were primarily economic. Firstly, there is broad agreement that Airbnb boosts revenues for local businesses and that it provides an income for Airbnb hosts. These findings align with those of others (Bivens, 2019; Siglar & Panczak, 2020). However, opinions differ somewhat regarding the role of Airbnb in providing increased employment opportunities for locals. Airbnb hosts view Airbnb's role much more favourably than other residents. Scepticism about the role played by Airbnb in local employment is also evident in the literature. Dolnicar (2019, p. 257) observes that "there is no immediate evidence of dramatic impacts on the labour market as a consequence of the rise of platform businesses". However, Sundararajan (2016) argues that the rise of crowd-based capitalism will be the demise of labour-based employment with big money going to the platforms and the labour – Uber drivers and Airbnb hosts - working for very little or nothing. On the contrary, in the case of the present study, Airbnb hosts were upbeat about their income-earning capacity.

Most respondents were, though, concerned about a range of negative impacts of Airbnb across the triple bottom line dimensions. Notably, other residents (non-Airbnb host) were more concerned about each issue than were the Airbnb hosts. In the Byron Shire, the most severely perceived negative impact identified is the socio-economic issue of reduced availability of affordable housing reflecting findings in several studies (Crommelin et al., 2018; Eccleston et al., 2019). Each of these studies reported that a high proportion of tourists led to a shortage of affordable longer-term rental properties. As Oskam (2019, p. 92) summarises, the "displacement of residents and services has started a vicious cycle which transforms neighbourhood from living environments into a commercial offer of accommodation and leisure facilities for tourist consumption". However, on the contrary Stors (2020) advocates for the social construction of new tourist sites with Airbnb hosts, and their place framings, playing a significant role in 'new' urban placemaking.

Three further perceived negative impacts relate to neighbourhood amenity. Non-Airbnb hosts, in particular, are concerned about rising short-term rental properties leading to increased traffic, congestion, and increased noise levels that adversely affect their neighbourhood lifestyles. As some of these impacts have existed for nearly 20 years (Buultjens et al., 2012; Eccleston et al.,

Table 9. Importance of information about Airbnb-related aspects.

		MedM			Of importance (%)	
Important to have	Overall	Airbnb host	Non-		Average	
information about	(u = 766)	(n = 151)	host $(n = 615)$	Not important	important	Very important
1. Long-term impacts on residential-rental	4.20	3.46	4.40	10	12	78
accommodation						
2. Long-term impacts on	4.19	3.55	4.37	80	14	78
infrastructure (e.g. roads,						
waste						
management facilities)						
3. Long-term impacts of	4.14	3.39	4.35	6	15	9/
Airbnb on						
the community						
4. The extent of	4.03	3.27	4.24	10	18	72
compliance with existing						
STRA regulations						
5. Regulations regarding	3.94	3.33	4.10	12	19	69
Airbnb rentals (host						
responsibilities,						
guest rights)						
6. Long-term impacts on	3.77	3.58	3.83	8	30	62
businesses in town						
7. Long-term impacts on	3.70	2.97	3.90	17	26	22
approved						
accommodation						
providers						
8. The location and type of	3.40	2.49	3.65	26	21	53
Airbnb properties						

Not important = includes groups Not important at all, and Of little importance; Of average importance; Very important = includes groups Very important and Absolutely essential.

2019) evidently, Airbnb is not the sole cause. However, with the shift to internet booking of STRAs, the impacts now appear exacerbated. The perception of declining liveability with the Byron Shire due to the high concentration of Airbnb in residential areas makes the platform a target reflecting broader concerns of tourism impact on residents worldwide. The character and quality of specific neighbourhoods may be changing (Petruzzi et al., 2020; Richards et al., 2019). However, the empirical evidence from this study does not support the wholesale notion of Airbnb bedevilling local neighbourhoods (A Phenomenology Collective, 2019; Zervas et al., 2017). Instead, following other commentators (Frisch et al., 2019; Grimmer et al., 2018) the reported 'mixed-impact' indicators go part-way in supporting integrated precincts that service residency, alongside leisure and work.

In terms of preferred interventions to regulate STRA, the finding of this study regarding respondents preferred rental caps on STRA is split. While the majority of respondents preferred a business/regulatory model which involves mandatory on-site management of STRA properties, the reported distinction between Airbnb hosts and other residents is new and requires further consideration. The former favour the status quo, i.e. unrestricted STRA letting; the latter favour restrictions in terms of a 180 day or 90-day limit. Nearly 50 percent of other residents (non-hosts) prefer a situation where STRA without a host present is not allowed at all! The approaches as taken in Australia, mainly (de)regulatory in Tasmania and laissez-faire in South Australia, and that of other cities around the world, particularly in the USA (permits) and Europe (zone restrictions and taxes), offer useful scenarios for further learning regarding regulatory facilitation of STRA. Albeit, each presents fresh ways to engage the community. While Airbnb is legal in such international cases, care is required to protect immediate non-host neighbours and neighbourhoods overall (Domènech & Zoğal, 2020; Grimmer & Vorobjovas-Pinta, 2020; Park, 2019).

The findings of this study suggest that locally specific regulation of the STRA sector across all three types of code (see Table 2) may alleviate several areas of stated participant concern. First, in terms of self-regulation, the results show that Byron's Airbnb hosts are less demanding for information about Airbnb-related aspects while other residents highly value such information. They are especially keen to know about the long-term impacts of Airbnb on residential-rental accommodation, on local infrastructure and the community, as well as how Airbnb hosts are complying with existing regulations.

Second, in terms of semi-interventionist or co-regulation, the majority of survey respondents reacted positively. Such an approach sanctions an activity though with certain restrictions: providing incentives for improved performance; introducing subsidies or taxes (e.g. bed-tax); promoting price & quantity controls (e.g. day caps); or creating institutions that reduce transaction costs involved in parties negotiating solutions to externality problems (e.g. Airbnb collecting taxes). In particular, the non-Airbnb hosts supported the implementation of day-caps for STRA without on-site management. The majority of respondents also support the introduction of a bed tax as one way of regulation to raise taxes from Airbnb properties.

Third, perceived as a necessity by the majority of respondents, the government should introduce regulation for the implementation of registration and permit systems for all STRA along with adequate reporting avenues to lodge complaints of misconduct, and enforcement of noncompliance of STRA.

Regulation of STRAs, and the enabling booking platforms, cannot be universal as each destination's needs and goals are quite different – as highlighted through the various State-based regulatory approaches in Australia. This study recommends that councils which experience intensifying STRAs, threatening to compromise the life-quality of residents, should be permitted to impose stricter rules and regulation to address the situation - the most extreme form of regulation (see Table 2). Local councils ought to have the autonomy to protect their community – a position currently not available to independent councils across all states in Australia. Ideally, municipal governments worldwide need to be given some opportunity by state or national governments to shape the regulation of STRA within the local area. Local governments best

understand their various community stakeholder groups and can best assess the trade-off between positive, negative, and mixed impacts for the local economy, society and ecology. They can consider the concerns of the whole community - including residents, Airbnb hosts, and renters, but also property investors, AAPs, and visitors. Empowerment of local councils to promote dialogue between the broad-ranging stakeholders is preferable to a 'one size fits all', State-wide regulatory approach. It remains essential to find locally appropriate solutions; addressing community concerns, tourism demands, and housing issues, all pertinent to that local government area.

Concerning residents' information needs about Airbnb in the community, it is again thoughtprovoking to note the gap between Airbnb hosts and non-hosts. Airbnb hosts tended to have lower information needs than non-Airbnb hosts. Therefore, STRA regulators and administrators need to consult with both stakeholder types. Addressing the impacts of over-tourism, including Airbnb, as well as accounting for residents' preferences, is vital for destination managers. Buultjens et al. (2012) argue that to ensure a thriving destination, the entire community must accept tourism and tourists. Community approval of tourism, or social sustainability, along with economic and ecological sustainability, underpins the UN's 2018 sustainable development goals. Thus, accounting for the mediating role of residents' perceptions of tourism development can significantly improve management strategies (Gannon et al., 2020). Similarly, mitigating unjustified fears and a potential moral panic over new developments can promote innovative opportunities for stakeholders. Despite open consultation and public participation processes, not all stakeholders' concerns will be identified or subsequently addressed to the likes of those stakeholders (Caldicott et al., 2014; Ravenscroft, 2020).

Conclusion

The sharing economy started idealistically, intending to connect people with other people's underused assets, which could benefit the environment and society more widely. However, more recently, the sharing economy has come under criticism as being more selfish than sharing. In the case of Airbnb, many of its listings are not actually by homeowners letting out spare bedrooms but are by professional landlords using the platform to get around existing regulations and get higher rents from daily, rather than long-term, rentals. According to real estate attorney Phyllis Weisberg, chair of the Cooperative & Condominium Law Committee of the New York City Bar, "There is something fundamentally wrong with a business model that encourages people to breach their obligations and responsibilities. This is a selfish kind of economy where people will just do this to make as much money as they can until they get caught" (Goodale, 2015, p. 1). The backlash against the sharing/selfish economy has spurred a more in-depth look at the priorities and moral underpinnings of the sharing economy. It also raises the need to investigate its externalities. Through this paper, we explore ways to mitigate the negative and promote the positive impacts within the Byron Shire.

The paper principally explores STRA (including Airbnb) as providing both opportunities and challenges for a non-metropolitan community. It notes the influence of lobbyists and advocates on both sides, which feed the evolving debate over the regulation of STRA. In such regard, this study also provides evidence around residents' preferred ways to regulate STRA and the relative importance to the community of STRA-related information. Common in some metropolitan holiday hotspots, the likes of Amsterdam, Barcelona and Venice, the shortage of available housing for purchase or rental combined with the increase in property prices and rents have disrupted the social fabric of the community. Subsequently, this study reinforces the notion that STRA platforms, notably Airbnb, have highly emotional impacts upon host communities in both metropolitan and non-metropolitan tourist hotspots.

Shifting local to national strategic thinking, beyond economic imperatives, is crucial for core community, cultural, and environmental values to survive and receive consideration as equals necessary in a balanced social-ecological system (Milano et al., 2019; Ravenscroft, 2020; Sroypetch & Caldicott, 2018). Dynamic change and action going forward must be the primary focus towards fulfilling the requirements of local stakeholders involved in tourism operations while contemplating how best to manage for sustainable development goals within business and community - inspiring, new management practices within and beyond the tourism industry. Some distressed communities may seem completely lost to non-sustainable tourism development, primarily brought on through unintended consequences of a market disruptor. However, addressing the critical equilibrium between ecology, societal wellbeing and economics can bring back and strengthen community; promoting resilience against further internal and external shocks.

Limitations and further research

Although the research team made every effort to encourage survey participation by all adult Byron Shire residents, the proportion of Airbnb hosts in the sample (20%) is higher than that of the wider Byron Shire population (estimated at around 6%²). Respondents who are Airbnb hosts or benefit economically from Airbnb, or those who are actively opposed to Airbnb (i.e. in neighbourhood groups or personally impacted by nearby Airbnb rentals) maybe slightly over-represented. Additionally, the study focused on only one local government area out of 129 in NSW and 547 across Australia. While the area studied is a renowned tourism hotspot, the findings cannot be generalised. The research thus calls for a widened scope, through a larger-scale study, to confirm data broadly applicable to more local government areas and beyond Australia. Replicating the research methodology across other towns in NSW/Australia will assist in building a comparable data snapshot(s) and develop a more comprehensive understanding of why different regions might need various STRA regulations.

Further follow-up research is needed to understand how the COVID-19 pandemic moderates the impact of STRAs on a local community. During the Australian six-week lockdown from 23 March to 15 May, nearly all of Byron's economy links to tourism and hospitality, ninety per cent of shops, hotels and restaurants in Byron Bay were closed. However, in April 2020, even with the COVID-19 restrictions, the pre-COVID-19 stock of 3,500 or so Airbnb listings for the Byron Shire continued. This was despite the significant loss of international visitors. The anomaly may be due to Byron Bay becoming the 'go-to domestic destination' for many domestic travellers after easing of NSW intra-state lockdown-regulations and the tightening of interstate-border restrictions (Kirpatrick, 2020). Thus, the impacts of Airbnb on Byron – positive, negative, and mixed - appear to be ongoing and inviting further research. Such studies might assess the differential impact now that the influx of tourists is mainly domestic.

Future research is also warranted to explore the emotional impacts of Airbnb on host communities, which is another form of unintended, third party effect STRA has on community residents. The high number of Airbnb rentals tends to displace long-term rentals, continuously and economically challenging renters' sense of wellbeing. White (2020) suggests, although a common phenomenon, it is exacerbated by the COVID-19 impacted economy and decreased job market insecurities.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes

1. The sample size relating to each key finding reported in the above sections varies as not all 819 participants answered all pertinent questions.



2. Around 1600 Airbnb hosts account for around 3,500 Airbnb listings in the Shire. The population of adults (>18 years of age) in Byron is approximately 28,000.

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