A redeveloped Sydney Fish Market: enhancing its wider economic and social impacts

2016
Limitation of our work

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Executive summary

In July 2014, the NSW Government announced the appointment of UrbanGrowth NSW to drive a number of urban renewal programs, including one for the Bays Precinct. In conjunction with the UrbanGrowth-led transformation of the Precinct, Sydney Fish Market (SFM) has envisioned a complete rejuvenation to establish SFM as a world-leading market and cement its place as an iconic Sydney destination. The redevelopment is expected to transform the market’s retail precinct with a contemporary urban design, providing a fresh produce market, unique bar and dining experiences for visitors, and creating a waterfront promenade.

To improve public access, the proposed redevelopment will include a major carpark facility, improvements in public transport linkages, and interpretative and directional signage for visitors. The redevelopment will also provide world-class auction and wholesale facilities to facilitate world’s best practice in the storage and handling of fresh seafood.

SFM has commissioned Deloitte Access Economics (DAE) to assess the wider economic and social impacts of a redeveloped SFM. These are explored through data and information provided by SFM, a dedicated consumer survey, and consultations with wholesale and retail tenants at SFM, and representatives of the catching industry. It builds on previous work by DAE that assessed the wider economic and social impacts of SFM in its current state.

**Wider economic and social impacts of redevelopment**

More than 500 species and 13,400 tonnes of seafood are traded through the SFM wholesale market every year, with even more seafood traded through SFM tenants. Consumers have greater choice and variety as they are able to access unique and uncommon seafood species from local fish shops and restaurants throughout Sydney and NSW. Academic research has found that businesses that offer a greater variety of product and choice can make consumers better off even if prices remain unchanged (Lancaster, 1990).

DAE previously estimated that consumer benefits from choice and variety are worth the equivalent of between $62 million and $87 million per year (DAE, 2016). The SFM Business Case (December 2015 update) predicts that there will be an increase in wholesale trade through the auction following redevelopment. It is reasonable to assume that a proportion of the additional fish and seafood traded through the site will be of special varieties. This could potentially generate choice and variety benefits for consumers across NSW as wholesale trade through SFM.

One of the most distinctive aspects of SFM is that visitors can have a unique experience visiting an authentic working market. Through the colocation of wholesale and retail, customers have access to an authentic market experience that they would not otherwise encounter, such as at their local fish shop. This generates consumer welfare benefits and is measured by considering visitors’ strong preference for the SFM experience in comparison to other places to buy fish. DAE previously estimated that consumer benefits from a unique experience were between $109 million and $153 million per year (DAE, 2016). Retaining retail and wholesale elements together will maintain the consumer benefits of the unique SFM experience.

By scaling up previous estimates based on expected increases in wholesale and on-site retail trade following redevelopment from the SFM Business Case (December 2015 update), additional consumer benefits from choice and variety and a unique market experience are expected to be approximately between $45 million and $64 million per year (average of $54 million per year).
The redevelopment of SFM is expected to draw additional visitors to Sydney, resulting in a benefit for the NSW economy. According to SFM estimates, in the first year following redevelopment, visitation per year is anticipated to increase to more than 5.5 million in comparison to approximately 3 million visits under the case where the redevelopment did not take place. The redevelopment is likely to boost the NSW economy by around $52 million on average per year (real 2016 dollars) and will support an average 136 FTE additional jobs per year in the NSW economy over 10 years following redevelopment.

The colocation of wholesale and retail businesses generates productivity benefits such as transport savings, sharing of infrastructure/facilities, and reduced overheads. Without the colocation of wholesale and retail tenants at SFM, it is likely that there would be more frozen (as opposed to fresh produce), and less variety of seafood. DAE has previously estimated that industry productivity benefits are about $18 million per year (DAE, 2016). The proposed redevelopment would maintain the colocation of wholesale and retail activities, construct a larger loading dock area, and expand plant facilities to allow for best practice technologies to be introduced. This would have the potential to generate further industry productivity benefits from colocation however these are likely to overlap with other benefits captured in our analysis (i.e. tourism and consumer benefits).

SFM is a well-recognised brand in Sydney and is closely linked to Australia’s brand proposition as a unique holiday destination offering fresh food, water and outdoor experiences. A redevelopment using the SFM brand would build on existing consumer trust and confidence in SFM’s brand and reputation, which have been fostered over many decades. The redevelopment of SFM is also likely to enhance the strength and stature of the SFM brand as considered through the BrandAsset™ Valuator (BAV) framework due to the increased quality of offerings at SFM and greater publicity and awareness of SFM as an iconic Sydney destination.
The redevelopment is expected to include the creation of a quality waterfront promenade and outdoor dining facilities, the expansion of current cafes and takeaway offerings, and the introduction of major fresh produce markets.
Takeaway
Sydney Fish Market (SFM) is one of Sydney’s major tourist destinations, attracting three million visits a year from local, and domestic and international visitors.

While there are many fish markets located in Australia and internationally, SFM is the largest fish and seafood market of its kind in the southern hemisphere and, in terms of variety, the third largest in the world. Some of its key features include:

- Being a major drawcard for tourism, including Sydneysiders, interstate and international visitors
- Offering more choice and variety to consumers across NSW by facilitating the wholesale trade of over 500 species of fish and seafood
- Combining both retail and wholesale trade allowing for industry productivity benefits as well as being the centre to the state’s fishing industry
- Education and training for employees, through the Seafood Industry Training Package, school students and the wider community, through the Sydney Seafood School (SSS).

SFM has commissioned DAE to assess the wider economic and social impacts of a redeveloped SFM. This note explains the wider economic and social impacts of SFM and how they might be enhanced by a redevelopment, and assesses the tourism impacts of a redeveloped SFM.

This report builds on previous work by DAE, which assessed the wider economic and social impacts of SFM in its current state. These are explored through data and information provided by SFM, a dedicated consumer survey, and consultations with wholesale and retail tenants at SFM, and representatives of the catching industry.

1.1 The proposed redevelopment
In July 2014 the NSW Government announced the appointment of UrbanGrowth NSW to drive a number of urban renewal programs, including one for the Bays Precinct. In conjunction with UrbanGrowth-led transformation of the Precinct, SFM has envisioned a redevelopment to establish SFM as a world-leading facility, cementing SFM’s place as a Sydney icon and reputation as ‘Australia’s Home of Seafood’.

Figure 1.1: Location of Sydney Fish Market

Source: SFM Business Case (December 2015 update)
The purpose of the proposed redevelopment of SFM is to transform the current market’s retail precinct with a contemporary urban design, provide unique dining experiences for visitors, and world-class auction and wholesale facilities.

To achieve this, the redevelopment is expected to include a number of elements that add to the transformation of SFM. According to the SFM Business Case (December Update, 2015), the elements expected to drive the most benefit include the creation of a quality waterfront promenade and outdoor dining facilities, the expansion of current cafes and takeaway offerings, and the introduction of major fresh produce markets.

Other elements that are likely to strengthen its position as a major tourism attraction include the introduction of new themed bars and finer dining (oyster/wine, mussels/beer), better access to the site including improvements to public transport and a major carpark facility, a dedicated school tour program access, and inclusion of interpretative and directional signage for visitors.

Vision for redevelopment
SFM’s vision for redevelopment (SFM Business Case, 2015) involves:

- Establishing SFM as the global benchmark for fish markets in terms of fresh seafood and other produce, seafood storage, handling, and auction facilities
- Creating a unique tourist destination that brings people to Sydney from around the state, interstate and overseas, and is based on an authentic market experience
- Establishing SFM as a leader in seafood sustainability and education, including opportunities in research, vocational training and nutritional education and more tour offerings and Sydney Seafood School programs for visitors
- Establishing SFM as an iconic landmark in Sydney that respects the maritime heritage of the site, while reflecting the urban future of Sydney
- Establishing SFM as a leader in urban design, providing a connecting link within the cultural ribbon around Sydney Harbour.

DAE developed a consumer survey to assist in estimating the impacts of a redeveloped SFM (refer to Appendix A). While responses from more than three-quarters of visitors to SFM revealed a preference to SFM relative to other places to buy fish, a significant number of respondents also said that issues including transportation, cleanliness, access and crowds negatively impacted their visits to SFM (see Figure 1.2).

**Figure 1.2: Survey respondents’ current issues with SFM**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport or parking availability</td>
<td>42%</td>
</tr>
<tr>
<td>Cleanliness and/or smell</td>
<td>32%</td>
</tr>
<tr>
<td>The crowd</td>
<td>37%</td>
</tr>
<tr>
<td>Access to parks, outdoor areas, waterfront</td>
<td>14%</td>
</tr>
</tbody>
</table>

*Source: Deloitte Access Economics*
Enhancing wider economic and social impacts

The redevelopment is expected to increase consumer benefits from choice and variety and a unique market experience by $54 million per year.
A redeveloped Sydney Fish Market: enhancing its wider economic and social impacts

Takeaway
2.1 Overview
SFM previously commissioned DAE to conduct an economic contribution study and analyse SFM’s current wider economic and social impacts. These were explored through data and information provided by SFM, a dedicated consumer survey, and consultations with wholesale and retail tenants at SFM, and representatives of the catching industry.

By itself SFM is a small commercial operation in terms of its direct expenditure, employment and total economic contribution. While important, these measures do not capture the important features of SFM – its contribution to tourism, the value customers receive from choice and variety, and a unique market experience, and the role of the market in facilitating an efficient industry. A measure of SFM’s wider economic and social impacts captures the benefits to SFM visitors as well as those to the broader community.

Section 2.2 provides some discussion of these benefits, as well as how redevelopment could enhance them. The concepts are described in further detail in The economic and social impact of Sydney Fish Market (DAE, 2016).

2.2 Potential benefits of a redeveloped SFM
The redevelopment of SFM has the potential to not only increase revenue for SFM, but also enhance the wider economic and social impacts of SFM. It will generate tourism benefits by drawing additional tourists to Sydney and further boosting Sydney’s image as a destination for vibrant outdoor experiences and fresh food dining experiences. Tourism benefits have been quantified and are discussed in greater depth in Chapter 3.

This section explores how a redeveloped SFM could further contribute to:

- Consumer benefits from greater choice and a unique experience
- Industry productivity benefits from the colocation of wholesale and retail businesses on the SFM site
- The existence value of SFM
- Educational and training opportunities.

2.2.1 Choice and experience
More than 500 species and 13,400 tonnes of seafood are traded through SFM’s wholesale market every year. Consumers have greater choice and variety as they are able to access unique and uncommon seafood species from local fish shops or restaurants throughout Sydney and NSW. Academic research has found that businesses that offer a greater variety of product can provide consumers with more choice, and can make consumers better off even if prices remain unchanged (Lancaster, 1990). Consumers place a value on having greater choice and this value may not be captured in the price paid for a good or service. Con Liaros, Managing Director of Poulos Bros Seafoods, believes there are a number of benefits of SFM operations, including for buyers.

“Buyers also benefit as there is a larger range of product available in the one place.”

Con Liaros, Managing Director, Poulos Bros Seafoods
DAE previously estimated that consumer benefits from choice and variety are worth the equivalent of between $62 million and $87 million per year (an average of $75 million) (DAE, 2016). As proposed in the SFM Business Case (December 2015 update), the redevelopment would involve a redesign of the wholesale and auction site. The SFM Business Case (December 2015 update) predicts that there will be an increase in wholesale trade through the auction following redevelopment. It is reasonable to assume that a proportion of the additional fish and seafood traded through the site will be of special varieties. While the number of varieties is not expected to increase, increased access to special varieties and greater volume will generate choice benefits to consumers across NSW.

One of the most distinctive aspects about SFM is that visitors can have a unique experience visiting an authentic working market. Through colocation, customers have access to an authentic market experience that they would not encounter elsewhere, such as at their local fish and chip shop. This generates consumer welfare benefits and is measured by considering visitors’ strong preference for the SFM experience in comparison to other places to buy fish. DAE previously estimated that consumer benefits from a unique experience were between $109 million and $153 million per year (an average of $131 million) (DAE, 2016). Retaining retail and wholesale elements together will maintain the consumer benefits of the unique SFM experience.

By scaling up previous estimates based on expected increases in wholesale and on-site retail trade following redevelopment from the SFM Business Case (December 2015 update), additional consumer benefits from choice and variety and a unique market experience are expected to be approximately between $45 million and $64 million per year (average of $54 million per year).

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**Catchers Trust**

Catchers Trust is a unit trust for NSW commercial fishermen and aquaculturists. The Trust owns 50% of SFM (the remaining half is owned by SFM Tenants and Merchants Pty Ltd).

David Saul, Secretary for the Catchers Trust, noted that the colocation of wholesalers and retailers makes for a unique visiting experience. “With an integrated working market, SFM provides an authentic and special experience for visitors.”

He also noted the real benefit to industry of a redevelopment will be greater dividends to the market through higher turnover. “For the catching industry, greater returns allow them to invest in more efficient and sustainable boats and equipment.”
2.2.2 Industry productivity benefits

The colocation of wholesale and retail businesses generate productivity benefits such as transport savings, sharing of infrastructure/facilities, and reduced overheads. Academic research has found that wholesale markets enhance storage and handling conditions, with reductions in post-harvest produce losses of around 30% (Tollens, 1997). John Jefferson, of Nicholas Seafood and Peter’s Fish Market (retail tenants at SFM), said that many retailers would ‘go broke’ if they had to travel to several locations to purchase different types of seafood, resulting in ‘reduced diversity of seafood offerings’ at local fish shops. Without the colocation of wholesale and retail tenants at SFM it is likely that there would be more frozen (as opposed to fresh produce), and less variety of seafood. DAE has previously estimated that industry productivity benefits are about $18 million per year (DAE, 2016).

The proposed redevelopment (SFM Business Case, December 2015) would maintain the colocation of wholesale and retail activities. It is expected to increase efficiencies through a larger loading dock area and expanded plant facilities, which will allow for best practice technologies to be introduced. This would have the potential to generate further industry productivity benefits from colocation however these are likely to overlap with other benefits captured in our analysis (i.e. tourism and consumer benefits).

2.2.3 Existence value

SFM is also a significant cultural icon – this is an important intangible value too. People regularly place a value on things they may not use or visit, such as beaches nearby or the city landmarks. SFM’s existence value, previously estimated to be about $25 million per year, reflects the value people place on the market, even though they may not visit, yet they have the option to (DAE 2016). The redevelopment would enhance SFM’s prominence as an iconic destination in Sydney and make it a more desirable place to visit. A redevelopment is also likely to increase the existence value of SFM to the community.

2.2.4 Education and training

Current educational opportunities at SFM exist for employees and the fishing industry through the Seafood Industry Training Package and less formal training. SFM’s Sydney Seafood School educates visitors on the correct and safe preparation and consumption of seafood.

While SFM currently runs some programs for school students, the proposed redevelopment would expand school tours to teach local children about seasonality, healthy eating and sustainable living. Through the Sydney Seafood School, SFM would offer world-class seafood opportunities in terms of research, vocational training and nutritional education.

2.3 The SFM brand and redevelopment

SFM is a well-recognised brand in Sydney and is closely linked to Australia’s brand proposition as a unique holiday destination offering fresh food, water and outdoor experiences. Under a brand contribution approach, DAE previously considered whether brand contributes to retail expenditure at the SFM site, and SFM’s wider economic and social benefits.

Previous estimates found that SFM brand contributed around $32 million per year to on-site retail spending. These findings drew on consumer survey results in which visitors to SFM were asked to apportion their reasons for visiting. Respondents attributed 16% of their reason for visiting to SFM’s reputation and brand. Tourism Australia (2010) has identified SFM, its cooking classes and fresh local produce as ‘uniquely Australian’.

Brand could also be considered to contribute more broadly to the consumer benefits of a unique market experience, with brand contributing $21 million per year, and to the existence value of SFM (brand contribution of $4 million).
These figures give an indication of the importance of brand in understanding the value of the SFM. The estimate of the economic and social contribution of the brand is greater in magnitude to the estimate of the institution’s role in lifting industry productivity and its direct and indirect value add.

Brand is an important part of the overall SFM story and would be a significant factor in the redevelopment. A redevelopment using the SFM brand would build on existing consumer trust and confidence in SFM’s brand and reputation, which have been fostered over many decades.

2.3.1 Consideration of brand strength and stature
The redevelopment of SFM will clearly contribute to the SFM brand. One way to consider how it will contribute is through the BrandAsset™ Valuator (BAV) framework.

In the early 1990s, the BAV was developed by Young & Rubicam to provide a measure of brand value, integrating various factors contributing to audience perceptions. The organisation’s brand value is estimated in comparison with similar organisations and brands in similar sectors. The BAV measures value on two fronts: strength and stature. Brand strength comprises the brand’s differentiation, which is the uniqueness of the brand's offerings, and relevance of a brand to its target audience. Brand stature is measured through a brand’s esteem, which is the emotional connection, respect and loyalty consumers have for the brand, and knowledge and familiarity of the brand.

The redevelopment is likely to enhance the brand’s esteem and knowledge. A rejuvenated SFM with its improved quality of offerings is likely to increase consumers’ connection with and regard for the brand. More than half of the survey respondents said they would visit SFM more often if issues such as congestion, access and cleanliness were addressed, and around a quarter said they would spend more while they were there. With greater publicity and awareness of a redeveloped SFM, the knowledge and familiarity with the brand will also increase.

It is possible that the redevelopment of SFM could also improve its differentiation through upgrades to the retail precinct and the Sydney Seafood School. However, one of the main risks with the redevelopment is that by improving cleanliness and distancing the wholesale trade from the retail precinct, it may lose its authentic working market atmosphere. This is currently an important attribute that makes visiting SFM a unique experience. Similarly, the transformation of the Bays Precinct overall also runs the risk that it could be too similar to other public spaces within Sydney.
Tourism benefits from a redeveloped SFM
The redevelopment is expected to boost the state economy by an average of approximately $52 million and support an additional 136 full time equivalent jobs on average per year.
SFM is an iconic harbourside destination and supports economic activity through its role in attracting tourists, both international and domestic, to Sydney. This chapter considers the tourism impacts of a redeveloped SFM on the NSW economy.

3.1 Understanding the impact
Consumer survey responses from domestic and international visitors to SFM revealed that currently more than three-quarters of visitors prefer the SFM relative to other places to buy fish in terms of quality and freshness of its seafood, and the experience. When asked whether issues such as the congestion, access and cleanliness were addressed, more than half of respondents said they would visit more often, and around a quarter said they would spend more while they were there.

Currently there are around 3 million visits to SFM per year. It is estimated that within the first year of redevelopment, visitation will increase to around 5.5 million (SFM Business Case 2015). By drawing in a greater number of tourists and encouraging existing visitors to spend more, a redevelopment would enhance the wider tourism benefits associated with SFM above current levels. The estimates are based on the SFM Business Case and DAE has not separately analysed it.

3.2 Current tourism benefits
DAE previously estimated the tourism benefits of SFM in its current state (DAE, 2016). The analysis identified the additional tourism spend associated with SFM. This expenditure was translated into an economic contribution figure which estimated the value added to the economy as well as the employment, providing an indication of the importance of SFM as a tourist destination.

The analysis was based on the number of visitors, categorised by visitor type. According to SFM data and Destination NSW survey results, there were 3 million visits to SFM, of which:

- 57% or 1.7 million are local visitors
- 22% or 660,000 are domestic day visitors
- 1% or 30,000 are domestic night visitors
- 20% or 600,000 are international visitors.

Based on the consumer survey and the ratios of international and domestic tourists that said SFM was a main factor in their decision to visit Sydney, we estimated that around $111 million of additional tourist expenditure was directly associated with SFM. The spending of locals was not included in the analysis as their spending at SFM is likely to have been a substitution away from other spending within the state.

The economic contribution of SFM visitors is estimated by converting the tourist expenditure into wages, gross operating surplus and employment of the businesses that are affected using ABS input-output tables.

Direct tourist contribution considers the economic activity that primarily relates to SFM and its operations. It is the sum of the returns to the primary factors of production – labour and capital – and can be calculated by adding the gross operating surplus and wages paid to employees.

To assist the interpretation of the tourist contribution, consider the following example. A tourist at SFM may have a meal at a restaurant. The restaurant would employ people and capital to serve the tourist, the wages paid to the waiter is the return to labour and the owner’s profit or earnings before interest, taxes, depreciation and amortisation (EBITDA) reflects the return on capital. This is the direct tourist contribution.

Indirect tourist contribution measures the demand for goods and services produced in other sectors of the economy as a result of the direct economic activity of SFM. It represents the flow-on economic activity that occurs as a result of linkages between different sectors of the economy.

Using the previous example, the restaurant also sources other intermediate inputs and thus expenses to run the business. The expenditure by the restaurant on, for example, fresh produce from markets, alcohol and liquor, electricity, gas and water, also creates economic activity. This economic activity is the indirect tourist contribution.
The $111 million spent by tourists directly contributes $53 million in value added and supports 632 FTE jobs. The flow of SFM tourism-related economic activity into other sectors of the economy is represented in Figure 3.1. Using input-output tables, which provide information on how to allocate the estimated total expenditure by different types of tourists to wages, gross operating surplus and employment, SFM contributes an additional $20 million in indirect value added to GSP and generates around 143 FTE jobs.

Figure 3.1: SFM’s tourism contribution flow

<table>
<thead>
<tr>
<th>SFM direct tourist contribution</th>
<th>$53 million</th>
<th>Fresh produce, water, gas and electricity, and cleaning services</th>
<th>Indirect tourist contribution</th>
<th>$20 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct employment</td>
<td>632 FTE jobs</td>
<td>Other business services</td>
<td>Indirect employment</td>
<td>143 FTE jobs</td>
</tr>
</tbody>
</table>

Source: Deloitte Access Economics

In summary, visitor expenditure generated by SFM is estimated to contribute $72 million in value added to the NSW economy and support 775 FTE jobs. The results are summarised in Table 3.1.

Table 3.1: Current tourism contribution of Sydney Fish Market

<table>
<thead>
<tr>
<th></th>
<th>Total contribution</th>
<th>Direct contribution</th>
<th>Indirect contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spend ($m)</td>
<td>$110.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross output ($m)</td>
<td>$142.3</td>
<td>$100.4</td>
<td>$41.9</td>
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<tr>
<td>Labour income ($m)</td>
<td>$45.8</td>
<td>$35.6</td>
<td>$10.3</td>
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<tr>
<td>Gross operating surplus ($m)</td>
<td>$26.7</td>
<td>$17.1</td>
<td>$9.5</td>
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<tr>
<td>Value added ($m)</td>
<td>$72.5</td>
<td>$52.7</td>
<td>$19.8</td>
</tr>
<tr>
<td>Employment (FTE)</td>
<td>775</td>
<td>632</td>
<td>143</td>
</tr>
</tbody>
</table>

Source: Deloitte Access Economics
3.3 Quantifying the impact of redevelopment

Redevelopment of SFM will result in uplift in additional tourism benefits. We use computable general equilibrium modelling (CGE) to estimate this impact. The CGE model estimates the potential benefits of the redevelopment by looking at the impact on value added to the gross state product (GSP) and employment.

It is important to note that the tourism impact of the SFM in its current state and the impact of the redevelopment are conceptually different. Therefore, they have been modelled in different ways. Input-output analysis measures the levels of economic activity associated with SFM in the current state, whereas, CGE modelling considers the development as a shock to the economy that results in additional economic activity above the current level. For further information refer to Appendix B.

According to SFM estimates, in the first year following redevelopment, visitation per year is anticipated to increase to more than 5.5 million in comparison to approximately 3 million visits under the case where the redevelopment did not take place. In 2020 it is expected that there will be an additional 2.5 million visits.

The magnitude of the tourism economic activity under a redeveloped SFM demonstrates the importance of each of the components of redevelopment in attracting more visitors to SFM, inducing them to stay longer and/or spend more. The wider economic and social tourism benefits of a redeveloped SFM are based on the additional spending of tourists whose visit to Sydney was induced by visiting SFM. The spending of locals at SFM is not included in this analysis or counted as additional economic activity as it is likely to have been a substitution away from other spending within the state.

The additional tourist expenditure directly associated with a redeveloped SFM can be estimated using the ratios of international and domestic tourists who visit Sydney due to SFM (7% and 16% respectively) and their average trip spend. According to Tourism Research Australia (TRA), the additional average spend for an international tourist for their entire trip is around $2,131 per visit, $712 for a domestic overnight visitor and $408 for a domestic day tourist (TRA, 2015). This expenditure covers all trip expenditure except prepaid international airfares, motor vehicles, other major equipment and 70% of pre-paid package expenditure.

The redevelopment of SFM may also induce existing tourists to spend more during their visits. The survey suggests that around 22% of domestic tourists will spend more, whereas 40% of international tourists will spend more. It is possible that some of this additional spend on services, such as fine dining, substitutes for spending elsewhere. Based on the assumption that visitors spend 10% more during their trip on food and beverages, it is estimated that following the redevelopment:

- Given international tourists spend around $38.20 per visit, they will spend an extra $3.80
- Given domestic overnight tourists spend around $26.90 per visit, they will spend an extra $2.70
- Given domestic day tourists spend $21.20 per visit, they will spend an extra $2.10.

The redevelopment is likely to boost the NSW economy by around $52 million on average per year (real 2016 dollars) and will support an average of 136 FTE additional jobs per year in the NSW economy over 10 years following redevelopment (Table 3.2).

<table>
<thead>
<tr>
<th>NSW</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GSP* (Sm)</td>
<td>36</td>
<td>41</td>
<td>45</td>
<td>49</td>
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<td>57</td>
<td>59</td>
<td>60</td>
<td>62</td>
<td>63</td>
<td>52</td>
</tr>
<tr>
<td>Employment (FTEs)</td>
<td>98</td>
<td>110</td>
<td>122</td>
<td>131</td>
<td>139</td>
<td>150</td>
<td>151</td>
<td>152</td>
<td>152</td>
<td>152</td>
<td>136</td>
</tr>
</tbody>
</table>

Source: Deloitte Access Economics

Note: *Values are in real 2016 terms, and are not discounted.
References


2015b, ‘Sydney Fish Market Business Case Update, prepared by The Stafford Group, December.


Appendix A

Developing and fielding the consumer survey
To estimate the broader economic and social impact, Deloitte Access Economics developed a consumer survey to assist in estimating the impacts of SFM discussed above. Stancombe Research & Planning assisted with survey fielding. The survey received more than 500 responses from both domestic and international consumers, and included retail visitors to the precinct as well as domestic and international visitors to Sydney.

The survey covered a range of areas including:

- Screening and demographics questions
- Attitudinal questions about people's visiting habits and user perceptions of SFM
- Value questions of experiences and spending habits at SFM
- Questions around perceptions of SFM's broader value as an Australian icon
- Behavioural questions of tourists visiting Sydney and SFM
- The value placed on SFM's brand and importance of brand
- Demographic questions.

Respondents were categorised into five different cohorts, depending on frequency of their visits to SFM. Cohorts included local visitors (classified as frequent shoppers if they visit at least once every two months), domestic day visitors who had visited at least once in the past two years (which were further distinguished as either intrastate or interstate), international visitors (including those who had and had not visited SFM), and domestic non-users from NSW.
Appendix B

Two different modelling techniques are used to analyse tourism benefits:

- For the current state analysis, economic contribution is estimated using input-output (IO) analysis.
- For the future state analysis (in this case, the redevelopment of SFM), a computable general equilibrium (CGE) model is used to estimate the additional impacts.

**Input-output analysis**

Input-output (IO) analysis is appropriate for modelling the economic contribution of an activity as it provides the direct and indirect economic activity associated with an entity or industry – in this case, SFM. It quantifies the value added, which is the difference between the value of services or goods sold and the cost of inputs, of an industry’s/company’s economic contribution to gross domestic product (GDP) at the national level, or gross state product (GSP) at the state level. The estimate produced is a ‘snapshot’ in time of the economic activity associated with an activity, telling us what proportion of GDP or GSP the activity contributes to.

It does not tell us how much larger the economy is as a result of this activity though, as it is unable to model what the inputs to production would have produced if put to an alternative use. Given this, IO analysis is less suitable for assessing impacts of a policy change or stimulus. Such with/without analysis can only be performed properly using a CGE model.

**Computable general equilibrium modelling**

Computable general equilibrium (CGE) modelling is used to gauge the net benefit of an economic stimulus or policy – whether living standards will increase and by how much, not how much expenditure is incurred. Essentially, the CGE model contains a complex system of underlying economic relationships between the various agents (for example, households, producers, investors, government). The model formulas are solved simultaneously until the prevailing market equilibrium is reached for each forecast year (the end point of one projection year, acting as the starting market position for the next).

These models retain the basic economic structure of IO analysis but add in aggregate resource constraints and relative prices across industries to capture the fact that additional resources devoted to one industry necessarily come at the expense of activity elsewhere. They are composed of a general framework of the whole economy, which simulates the impact that real changes in certain markets and sectors have on other markets and sectors, through demand for factors of production and their subsequent prices. These economic impacts can also be forecast over a number of years rather than presenting a simple static snapshot as contribution studies do.

CGE analysis is also more appropriate for analysing shocks to the economy (such as the redevelopment of SFM) as it better accounts for the resources constraints inherent in the economy, and real price and wage movement as a result of the redevelopment.