



Valletta Cultural Agency

Economic Impact of V18

February 2020



Valletta Cultural Agency
Economic Impact of V18
KPMG
February 2020

Important Information

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The information set out in this document takes into account information known and made available to us up to the time of its preparation and is therefore current as at the report date.

There exists a significant degree of judgement involved in selecting methods and basis for arriving at our conclusions, and there are a significant number of items which may be subjectively considered. It follows therefore that, whilst our conclusions will be one which we consider to be both reasonable and defensible, others may arrive at a different conclusion.

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1 Direct, indirect and induced impact of V18

The approach adopted to estimate the economic impact of V18 considers the impact on Gross Domestic Product (GDP), which is a standard measure to gauge economic prosperity and success.

The approach considers direct investment expenditure in 2018 by Government to embellish Valletta, as well as direct spending by the Valletta Cultural Agency ('VCA', formerly known as 'Valletta 18 Foundation') in order to execute the various events and initiatives which coloured the Capital's calendar in 2018. Private sector investment, in particular in relation to hospitality (accommodation, food and drink), was also considered as a spin-off investment.

Apart from this type of direct spending, economic activity generated by visitors to Valletta (both local and non-local) must also be taken into account. More specifically, inbound tourists who visited Malta purely because of the 'Valletta 18 Programme' represent additional spending, and thus an injection, into the Maltese economy. On the other hand, inbound tourists who would have visited Malta anyway are not considered as relevant for this study.

Lastly, the approach also considers Maltese residents who visited Valletta to attend some cultural event or show, or to enjoy the ambience of the Capital, during 2018. This represents additional expenditure insofar as a) it is not displaced from other types of expenditure (for instance shopping in Valletta displacing expenditure away from shopping in other localities in Malta), and, if it is displaced, b) spending on V18 events has a higher multiplier than the displaced expenditure. Since data on displaced expenditure was not available, this effect is only analysed qualitatively.

The above would give the net effect on GDP. However, since GDP is not a perfect measure of general well-being, other effects, both positive and less positive, should be considered qualitatively, though such matters are beyond the scope of this report. Positive effects include aspects such as sustainability or legacy impact, social inclusion, and the value of the Malta / Valletta Brand as a destination, all of which are not reflected immediately in GDP. On the other hand, less positive effects, such as noise pollution, increased waste generation, and public space encroachment, impinge on the quality of life of residents and visitors alike.

The economic impact was estimated by first analysing the actual spend that occurred in Valletta and in other cities and towns across the Maltese Islands that would not have otherwise occurred in the absence of the V18 Programme. This is in line with the concept of additionality where the Programme is viewed vis-à-vis a hypothetical counterfactual scenario with no such Programme being held¹.

Another important concept is that of temporal delineation, where we are only considering expenditure which occurred in 2018. Whilst there could have been other investments (both private and public) which would have been motivated by V18 occurring before 2018, this report focuses on 2018 to avoid probability of over-estimation due to other confounding factors which might have driven the investment in Valletta in prior periods (such as the 2017 EU Presidency).

¹ It should be noted that it is not always straightforward to establish whether a particular investment would have occurred in a counterfactual scenario. In such cases, the analysis proceeds on the basis of hypothetical assumptions considered to be reasonable.

This additional expenditure was then analysed using the 2010 input-output model² to estimate the indirect and induced output, value-added, income, and employment creation.

Six spending groups were identified as being responsible for the majority of additional expenditure:

- Valletta 18 Foundation (now called 'Valletta Cultural Agency') as the organising body
- Public investment (Government of Malta, through various Ministries)
- Private investment in hospitality services, office space, and wholesale and retail space.
- Overseas spectators visiting Malta specifically for the V18 Programme (referred to as "Foreign spectators (V18)")
- Overseas spectators not visiting specifically for the V18 Programme (referred to as "Foreign spectators (Leisure)")
- Local spectators and volunteers

Considering the above, this report focuses on the first four spending groups, and does not seek to quantify the economic impact of Foreign spectators (leisure) and Local spectators and volunteers³.

When it comes to Foreign spectators (leisure), here we are referring to tourists who visited Valletta in 2018 and in some way or form interacted with the events being held during that year. Whilst it would be expected that expenditure would have taken place in Valletta, there are no data points which indicate that such expenditure would have been over and above expenditure in a counterfactual scenario without the V18 Programme. One notes that the expenditure per capita per night of tourists visiting Malta purely for V18 is higher than the general level of expenditure as reported by NSO. This would thus appear to limit the probability that tourists who would have visited Malta anyway, would have ended up leaving additional funds in the Maltese economy purely because of V18.

On the other hand, when one considers local spectators and volunteers, it is a fact that Valletta saw an increase in business during 2018 – this was confirmed through stakeholder consultations with a number of key business executives active in Valletta via the operation of various shops and franchises. However, there is no evidence which would indicate that such an increase in expenditure was not displaced from other sources outside Valletta. One can reasonably assume that much of the expenditure on retail was actually displaced (with other shopping districts in Malta acting as direct competitors to Valletta) but expenditure on cultural activities (which is less substitutable with other forms of entertainment) did register an increase. However, this report does not attempt to quantify this effect due to lack of data in this regard.

² Cassar, Ian, P., 2015, Estimates of Output, Income, Value Added and Employment Multipliers for the Maltese Economy, Central Bank of Malta.

³ It is assumed that all VCA expenditure in 2018 was related to the V18 Programme. As regards the split between public and private investment, more detail is provided in Section 6.

2 Economic impact at a glance

Considering additional expenditure by tourists, public and private investment in Valletta, and expenditure related to the organisation of the myriad of events and shows spearheaded by the Valletta 18 Foundation, the total impact (direct, indirect and induced) on the economy in 2018 was estimated at €678.10 million in terms of output. Tourism driven impact accounts for the main part of this result, accounting to 87% of the total. The rest is shared between public and private investment (10%) and Valletta 18 Foundation expenditure (2.6%).

When estimating the effect on Value-Added, results show a total impact of €276.18 million, which account for almost 2.23% of nominal GDP in 2018⁴ if one considers direct, indirect and induced value-added. Excluding induced impacts, the impact on GDP is of 1.60%. Again, tourism expenditure is the main driver of this result.

In terms of employment, it has been estimated that total FTEs supported by this increased activity reached over 8,300 when one considers employment creation in its widest sense (comprising direct, indirect and induced employment).

| Total output driven by V18 | | | | |
|-----------------------------|---------------------|-------------------|----------------|----------------|
| Category | Initial expenditure | Direct + Indirect | Induced | Total |
| | € 000s | € 000s | € 000s | € 000s |
| Tourism | 282,010 | 444,724 | 146,472 | 591,196 |
| Public & private investment | 32,000 | 51,872 | 17,067 | 68,939 |
| VCA expenditure | 11,115 | 15,264 | 2,702 | 17,966 |
| Total | 325,126 | 511,860 | 166,240 | 678,100 |

| Total value added driven by V18 | | | | |
|---------------------------------|---------------------|-------------------|---------------|----------------|
| Category | Initial expenditure | Direct + Indirect | Induced | Total |
| | € 000s | € 000s | € 000s | € 000s |
| Tourism | 282,010 | 171,630 | 68,894 | 240,525 |
| Public & private investment | 32,000 | 21,241 | 7,492 | 28,733 |
| VCA expenditure | 11,115 | 5,709 | 1,214 | 6,923 |
| Total | 325,126 | 198,579 | 77,601 | 276,180 |

| Total employment driven by V18 | | | | |
|--------------------------------|---------------------|-------------------|--------------|--------------|
| Category | Initial expenditure | Direct + Indirect | Induced | Total |
| | € 000s | FTEs | FTEs | FTEs |
| Tourism | 282,010 | 5,683 | 1,654 | 7,336 |
| Public & private investment | 32,000 | 726 | 192 | 918 |
| VCA expenditure | 11,115 | 69 | 29 | 98 |
| Total | 325,126 | 6,478 | 1,875 | 8,352 |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: VCA; Bugeja and Vella, 2019, 'Valletta 2018 Investment Survey, Economic Policy Department; NSO Inbound Tourism statistics.

⁴ Nominal GDP for 2018 was €12.379 billion (Eurostat)

3 Economic impact in detail

3.1 Multiplier effects

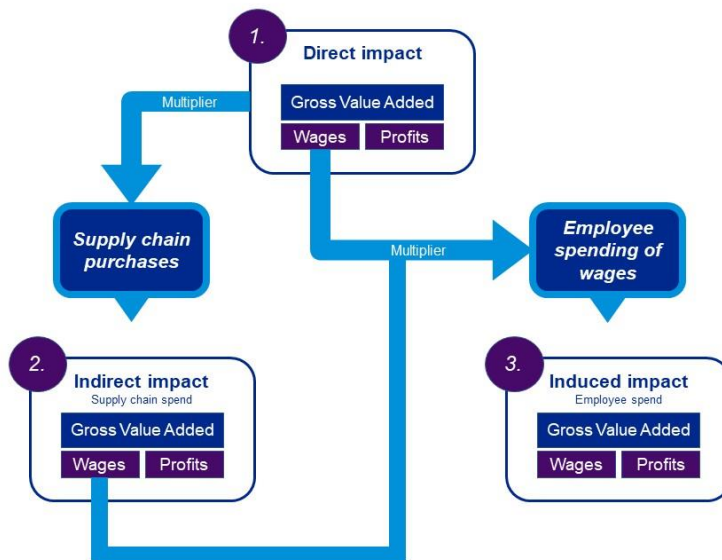
When a final consumer purchases any good or service, the impact on the economy is greater than the value of the original expenditure.

In the first instance, the payment from buyer to seller should cover the seller’s expenses. This is referred to as the ‘direct impact’, or the first round of spending. It is the demand created by the final consumer.

The demand created by consumers, creates new demand upstream for intermediate suppliers. By way of example, restaurant owners would need to engage with their own food suppliers, who in turn must buy goods from suppliers further up the supply chain. This is called the ‘indirect impact’ and is measured using ‘Type 1’ multipliers.

Finally, ‘induced impacts’, arise as a direct result of additional rounds of spending by agents involved in a transaction. For instance, hotels and restaurants pay wages to their employees. The extent to which such wages are re-injected in the economy depends on the employees’ own propensity to consume (the higher is the propensity to consume, the higher is the multiplier⁵). The more employees spend, the greater is the ripple effect in the economy. Induced impact is measured using ‘Type 2’ multipliers.

In sum, the total economic impact is given by the combination of direct, indirect, and induced impacts. This is illustrated below:



Source: KPMG Analysis

As part of our analysis, Type I and Type II multipliers were extracted from Input-Output tables for the Maltese economy. Input-Output tables provide an estimation of the flows of output from

⁵ Note that the multiplier is not a static or universal parameter but depends on a number of key assumptions surrounding methodology and calculation. See for instance Leeper et al, 2011, ‘Clearing up the Fiscal Multiplier Morass’, NBER Working Paper No. 17444

one sector of the economy to all other sectors. Hence, one can see how additional expenditure in one sector may result in additional spill-over benefits to other sectors.

Sections 4 - 6 below consider the direct expenditure categories by the respective spending groups identified previously and multiplies the direct impact from each item of expenditure by the appropriate economic multiplier. Note that there is an element of judgment in assigning expenditure categories to multipliers since the mapping is not always straightforward⁶. The Type I multiplier is utilised to obtain the combined Direct and Indirect output, while the Type II multiplier is utilised to obtain the combined Direct, Indirect, and Induced effect. Note that for each of the spending groups, 'Output', 'Value-Added', 'Income', and 'Employment' will be elicited.

3.2 Technical coefficients – tracing the constituents of final demand for Arts, entertainment and recreation⁷

Before we analyse the Type 1 and Type 2 multipliers for the arts, entertainment and recreation industry⁸, it is pertinent to consider the inter-linkages between various sectors of the economy on the one hand, and the arts, entertainment and recreation sector on the other, with this industry being viewed as a buyer of goods and services. These relationships can be shown using a 'Technical Coefficients' matrix.

Technical coefficients show, for each industry in the economy, the proportional value of inputs that are purchased from all sectors in the economy per monetary unit of output. This includes any purchases from the industry itself. Technical coefficients are presented in the form of a matrix (not shown in this report), where each column represents the production function of each specific industry. Specifically, the table below shows the ratio of the various inputs required to produce a unit of output from the arts, entertainment and recreation industry. This indicates that the financial and insurance and information and communication industries contribute the highest proportion in the form of inputs in the generation of a one unit of output by the arts, entertainment and recreation industry. Moreover, imports and compensation of employees, followed by operating surplus, also constitute an essential input in the generation of a one unit of output generated by the construction industry.

Therefore, for each €100 value of arts, entertainment and recreation output, €10 is paid to local suppliers further up the supply chain; €31 constitutes the Gross Value Added, comprising compensation to employees, fixed capital consumption, and operating surplus; €2 constitutes net taxes on production; and €57 represent imports.

⁶ In fact, for some expenditure types, we use a combination of multipliers – by taking a simple average – where we believe that a particular expenditure description is broad enough to warrant such a treatment.

⁷ Whilst this report explores the economic impact of the V18 Programme which is at the heart of the Arts, Entertainment and Recreation Industry by definition, several types of multipliers will be considered depending on the nature of the relevant expenditure. By way of example, investment related to the embellishment of squares are assigned construction and architecture multipliers.

⁸ Note that due to lack of data granularity in input-output tables, the Arts, Entertainment, and Recreation Industry (Industry R under NACE Rev 2) also includes 'Gambling and betting activities' (Division 92). Other relevant activities under Industry R include Creative arts and entertainment activities (Division 90), Libraries, archives, museums and other cultural activities (Division 91), and Sports activities and amusement and recreation activities (Division 93).

| Technical coefficients for the Arts, entertainment and recreation industry | |
|--|--------------|
| Sectors | |
| Agriculture | 0.000 |
| Production | 0.006 |
| <i>of which: manufacturing</i> | <i>0.003</i> |
| Construction | 0.002 |
| Distribution | 0.002 |
| Transport | 0.005 |
| Hotels and restaurants | 0.002 |
| Information and communication | 0.023 |
| Financial and insurance | 0.038 |
| Real estate | 0.001 |
| Professional | 0.011 |
| Administration and support | 0.003 |
| Public administration | 0.001 |
| Education | 0.001 |
| Health and social work | 0.000 |
| Arts, entertainment and recreation | 0.006 |
| Other services | 0.001 |
| Households as employers | 0.000 |
| Extra-territorial organisations | 0.000 |
| Output Technical Coefficients | 0.103 |
| Imports | 0.570 |
| Net taxes on products | 0.021 |
| Compensation of employees (A) | 0.061 |
| Net taxes on production (B) | 0.001 |
| Consumption of fixed capital (C) | 0.029 |
| Operating surplus, net (D) | 0.215 |
| Gross value added | 0.305 |
| Total Technical Coefficients | 1.000 |

Supply, Use and Input-Output Tables 2010⁹ National Accounts Unit, NSO, May 2016 Table 4a: Matrix of technical coefficients

3.3 Interlinkages with other sectors in the economy

As with any other economic sector, the arts, entertainment and recreation industry (industry R)⁹ cannot be assessed in isolation. Firms operating within the sector need to obtain inputs (rental of event venues, procurement of lighting equipment, procurement of supplies etc...) from other industries (real estate industry, transport industry, information and communication industry, transport industry, etc.) in order to produce any type of output, such as the execution of a cultural event.

In turn, the “arts, entertainment and recreation” industry supplies a number of ‘products’ which are used by many sectors across the economy. These industry inter-linkages are examined using so-called ‘supply’ and ‘use’ tables, which are then merged into input-output tables. These are also useful in calculating sector specific ‘multipliers’ which can gauge the impact of shocks in a particular sector on the entire economy.

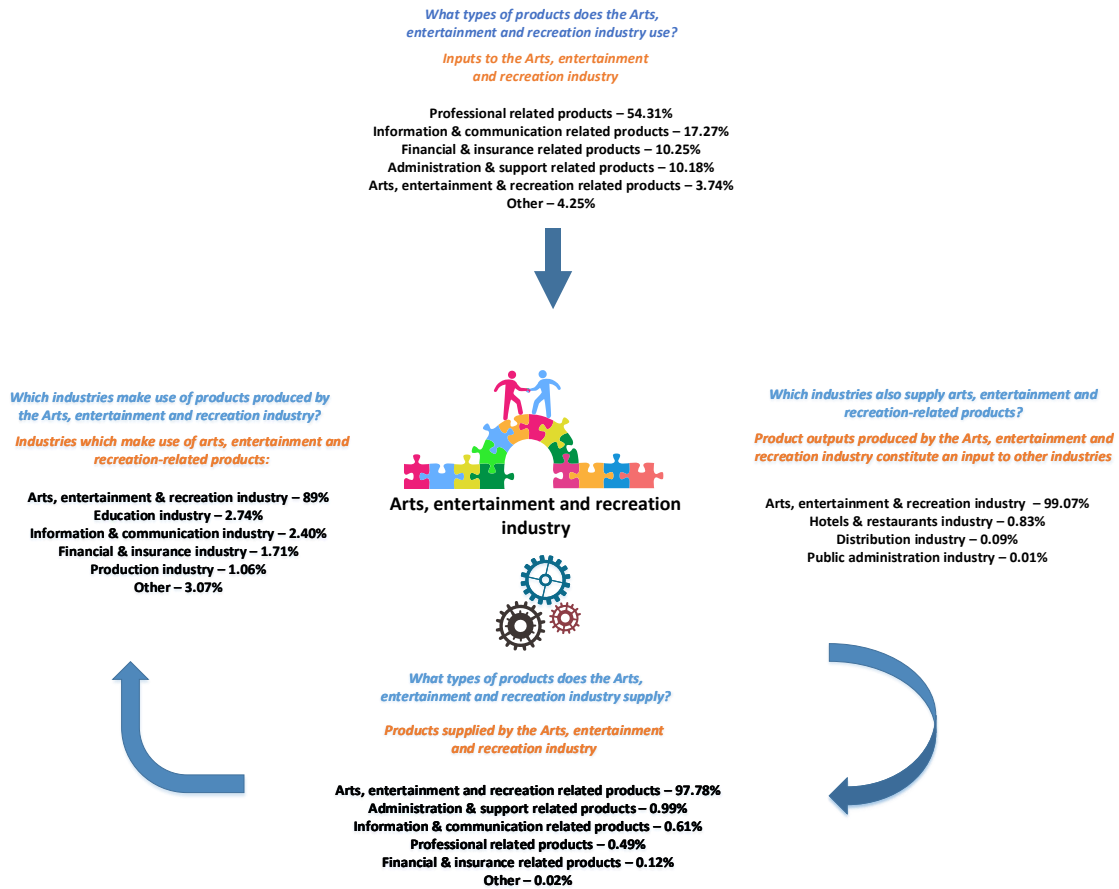
⁹ According to NACE Rev. 2, the constituents of this sector include divisions 90: Creative, arts and entertainment activities, 91: Libraries, archives, museums and other cultural activities, 92: Gambling and betting activities and 93: Sports activities and amusement and recreation activities.

With the focus retained on the arts, entertainment and recreation industry and its related products, the following points are worth noting¹⁰:

- The Arts, entertainment and recreation industry operates by using a number of key inputs or 'products'. Data from Use Tables shows that 54% and 17% of these inputs were products related to the Professional services products and Information and communication products respectively.
- Such inputs are transformed into output products (when combined with labour, capital and enterprise). For Divisions 90 and 91 in 2018, these were equivalent to €17.2 million with respect to compensation to employees, €7.9 million related to fixed capital consumption, €10 million retained as operating surplus, and around €0.6 million in net taxes on production,, yielding a GVA of €35.8 million. When combined with upstream inputs (intermediate consumption), the resulting output climbs to circa €92 million.
- For industry R (see Appendix for what is included under Nace Code Rev. 2), during 2010 the bulk of this output is classified as 'Arts, entertainment and recreation related products', with 98% of the share.
- Arts, entertainment and recreation industry-related products are essentially almost exclusively produced by the Arts, entertainment and recreation industry itself, as expected. Nevertheless, it is worth mentioning that 0.83% of related products are produced by the Hotels and restaurants industry.
- Arts, entertainment and recreation related products are utilised by a number of industries across the economy. The arts, entertainment and recreation industry itself uses 89.07% of such products, but a few other industries also utilise it as an input, including the education industry (2.74%), information and communication industry (2.40%) and the financial and insurance industry (1.71%) amongst others.

This analysis is presented as an illustration below:

¹⁰In this analysis, we are using the latest Use Tables pertaining to 2010. Whilst the absolute EURO amounts have changed drastically since 2010, economic theory posits that changes in the percentage shares may be more contained throughout the years since these would require shifts in the underlying fundamentals of an economy.



Source: KPMG Analysis; Calculations from 'Supply, Use and Input-Output Tables 2010' National Accounts Unit, NSO, May 2016 Tables 1 - 3

3.4 Multipliers for the Arts, Entertainment and Recreation Industry

The multipliers reported by Cassar (2015) are based on the Leontief demand driven model. The input-output model, which is the framework upon which the multipliers are based, shows what is known as the “Leontief Inverse” incorporating the notion that the production process required in order to produce a unit of output (for eventual use by final demand), requires intermediate inputs from other industries. These intermediate inputs constitute the “direct effects”. Moreover, the production of these additional intermediate inputs requires further increased rounds of production. The latter are the “indirect effects”.

The column extracted from the Leontief inverse of domestic production table below shows both direct and indirect input requirements, on all other industries, which are generated by a one unit of output. In other words, adding the Leontief inverse for all the economic sectors under consideration gives the output multiplier for the relative industry. The output multiplier is the ratio of the change in total output (i.e. the impact on GDP) in all sectors of the economy in response to a direct change in the basic output of a particular sector. Taking the AER industry as a case in point, the Type 1 output multiplier is 1.135. This implies that for every €1 increase in final demand in this sector, circa €1.135 would be expected to be generated in direct and indirect effects.



| Leontief inverse of domestic product flows | |
|---|----------------|
| Industry | Inverse |
| Agriculture | 0.000 |
| Production | 0.012 |
| of which: manufacturing | 0.005 |
| Construction | 0.003 |
| Distribution | 0.004 |
| Transport | 0.009 |
| Hotels and restaurants | 0.002 |
| Information and communication | 0.027 |
| Financial and insurance | 0.045 |
| Real estate | 0.002 |
| Professional | 0.016 |
| Administration and support | 0.005 |
| Public administration | 0.001 |
| Education | 0.001 |
| Health and social work | 0.000 |
| Arts, entertainment and recreation | 1.006 |
| Other services | 0.001 |
| Households as employers | 0.000 |
| Extra-territorial organisations | 0.000 |
| Output multiplier | 1.135 |

Source: Adapted from 'Supply, Use and Input-Output Tables 2010' National Accounts Unit, NSO, May 2016 Table 5: 2010 Leontief inverse of domestic product flows with multipliers for other inputs

4 Spending Group 1: Expenditure by V18

In this section, we consider the total expenditure throughout the V18 Programme, which consisted of around 140 projects and 400 events, involving around a thousand local and international artistes, writers, curators, and designers, amongst other artists in the wider sense.¹¹ These expenses are divided into categories such as 'direct operating expenses', 'rent' or 'hospitality'. In order to derive the total impact on the economy arising from the total output, each expenditure category was mapped to the pertinent industry which is associated with a distinct multiplier value. These multipliers were then applied to the respective expenses incurred and summed to achieve the results presented in the following sections.

4.1 Output multipliers

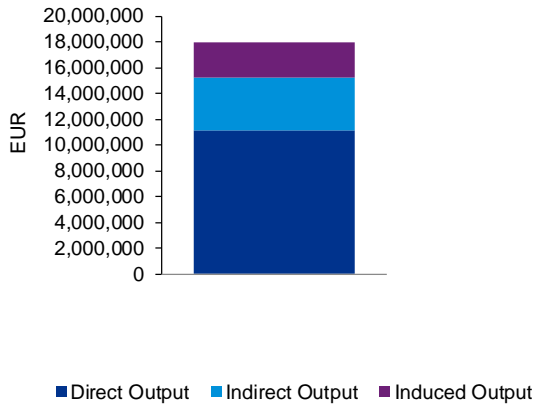
Output multipliers measure the ripple effect in an economy's output. The concept of output is slightly different than GDP, in that the former includes 'intermediate consumption', which is excluded from the GDP measure to avoid double counting when adding up all industries. A Type 1 output multiplier is applied to total output to elicit both 'Direct' and 'Indirect' effects, whereas a Type 2 output multiplier also elicits the 'Induced' effect.

The largest expense category for Valletta 2018 was 'direct operating expenses' which represents 75% of the total expenditure (see table on page 17). It was confirmed with VCA that such costs are associated with the 'Arts, Entertainment and Recreation' industry for which Type I and Type II multipliers of 1.34 and 1.54 were applied respectively. This means that a €1 increase in demand for these activities increases economic output by an additional €0.34 in indirect effects, whilst increasing the total economic output by an additional €0.20 in induced effects.

In addition, 9% of the total expenditure was incurred on 'Information Services' for which Type I and Type II multipliers of 1.61 and 2.10 respectively are applicable. As shown in the Table on page 17, other multipliers were used to derive the total impact. The economic effects attained from each of these expenditure categories were summed to give the total economic effects arising from expenditure by the Valletta 18 Foundation. In this respect, an expenditure of €11.12 million generated an additional €4.15 million in indirect output and a further €2.70 million in induced impacts, generating a total of €17.97 million.

¹¹ Source: Cultural Programme 2018: Valletta 2018, European Capital Culture of the Year.

Output multiplier effects



Source: KPMG Analysis

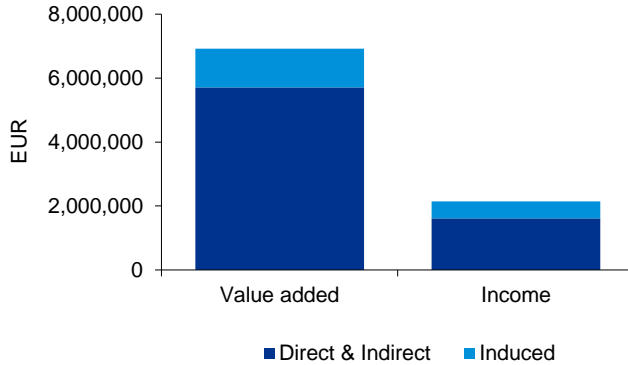
4.2 Value added multipliers

Value added multipliers measure the extent to which an increase in output generates value added in the economy. By value added we are referring to the creation of wealth in the economy, measured from the income side by compensation to employees, gross operating surplus, and consumption of fixed assets. Similar to the approach for the estimation of Output the analysis extended to the application of selected Type 1 and Type 2 multipliers to the different expense categories (see table on page [18]). As noted above, the main expenditure was categorised as pertaining to the Arts, Entertainment and Recreation industry, for which the Type 1 and Type 2 value added multipliers are 0.49 and 0.58 respectively. Value added generated during the Valletta 2018 Programme was estimated at €5.71 million in direct and indirect value added, with an additional €1.21 million in induced value-added effects.

4.3 Income multipliers

Income multipliers measure the extent to which an increase in output generates income for households. The Type 1 and Type 2 income multipliers for the arts, entertainment and recreation industry are 0.12 and 0.16 respectively. These, together with the multipliers for other expenditure categories, were applied to the respective categories and summed. The final value represents the estimated increase in income associated with expenditures by the V18 Foundation, which was around €1.61 million (for direct and indirect effects) with an additional €0.53 million (for induced effects), for a combined effect of €2.14 million.

Value added and income multipliers

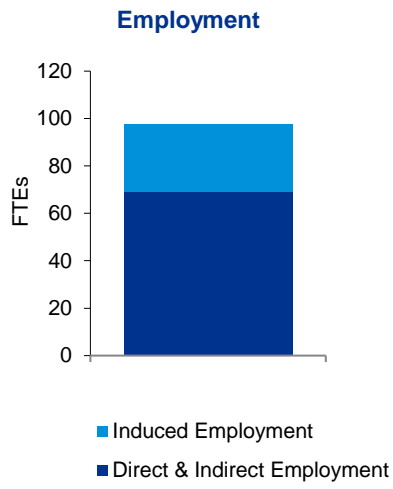


Source: KPMG Analysis

4.4 Employment multipliers

Employment multipliers estimate the number of jobs created as a result of a €1 million increase in demand in a particular sector. Applying the relevant Type I and Type II employment multipliers across the different expenditure categories gives an estimate of 69 jobs generated as an effect of the V18 Programme expenditure. This figure constitutes direct jobs and indirect jobs. The former refers to employment positions as a direct effect of V18 Programme expenditure (e.g. an office clerk employed at the Valletta Cultural Agency) whilst indirect jobs refer to employment positions generated as a result of intermediate demand created by the Programme (e.g. a digital designer working at a marketing agency which was contracted to carry out digital marketing for Valletta 2018). In terms of induced jobs, a further estimated 29 jobs (bringing the total up to 98) were estimated. Induced jobs refer to employment created as a result of additional rounds of spending¹².

¹² Note that employment in this sense is measured in FTEs, so any 'jobs created' in 2018 as a result of the events of the V18 Programme (e.g. artists or performers) would not be directly comparable, since these are probably transient.



Source: KPMG Analysis



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| Output multiplier analysis of V18 expenditure | | | | | | | | |
|---|-------------------|--|-------------------|--------------------|-------------------|-------------------|-----------------------------|--|
| Expenditure item | Expense (€) | Expenditure category | Type I multiplier | Type II multiplier | Direct effect | Direct + indirect | Direct + indirect + induced | |
| Direct operating expenses | 8,346,316 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 1.34 | 1.54 | 8,346,316 | 11,184,063 | 12,853,326 | |
| Salaries and wages | 468,135 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 1.34 | 1.54 | 468,135 | 627,301 | 720,928 | |
| Social Security Contributions | 193,089 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 1.34 | 1.54 | 193,089 | 258,739 | 297,357 | |
| | | D35 - Electricity, gas, steam and air conditioning supply | 2.26 | 2.51 | - | - | - | |
| | | E36 - Water collection, treatment and supply | 1.54 | 2.23 | - | - | - | |
| | | E37-E39 - Sewerage; waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services | 1.59 | 2.24 | - | - | - | |
| Utilities | 60,826 | Average | 1.80 | 2.33 | 60,826 | 109,285 | 141,522 | |
| Material and Supplies | 58,064 | G46 - Wholesale trade, except of motor vehicles and motorcycles | 1.47 | 2.10 | 58,064 | 85,354 | 121,934 | |
| Repair and Upkeep | 42,499 | C33 - Repair and installation of machinery and equipment | 1.37 | 2.43 | 42,499 | 58,223 | 103,272 | |
| Rent | 141,920 | N77 - Rental and leasing activities | 1.47 | 1.86 | 141,920 | 208,622 | 263,971 | |
| Office Services | 14,524 | N80-N82 - Security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support activities | 1.50 | 2.49 | 14,524 | 21,786 | 36,164 | |
| | | H51 - Air transport | 1.79 | 2.41 | - | - | - | |
| | | H50 - Water transport | 1.81 | 2.25 | - | - | - | |
| | | H49 - Land transport and transport via pipelines | 1.53 | 1.95 | - | - | - | |
| Travel | 56,114 | Average | 1.71 | 2.20 | 56,114 | 95,955 | 123,638 | |
| Information services | 995,406 | J62-J63 - Computer programming, consultancy and related activities; information service activities | 1.61 | 2.10 | 995,406 | 1,602,603 | 2,090,352 | |
| Contractual services | 607,214 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 1.34 | 1.54 | 607,214 | 813,667 | 935,110 | |
| | | K64 - Financial service activities, except insurance and pension funding | 1.51 | 2.52 | - | - | - | |
| | | M69-M70 - Legal and accounting activities; activities of head offices; management consultancy activities | 1.41 | 1.93 | - | - | - | |
| | | M73 - Advertising and market research | 1.52 | 2.07 | - | - | - | |
| | | M74-M75 - Other professional, scientific and technical activities; veterinary activities | 1.56 | 1.92 | - | - | - | |
| Professional services | 120,088 | Average | 1.50 | 2.11 | 120,088 | 180,132 | 253,386 | |
| Hospitality | 10,951 | I - Accommodation and food service activities | 1.63 | 2.25 | 10,951 | 17,849 | 24,639 | |
| Total | 11,115,145 | | | | 11,115,145 | 15,263,579 | 17,965,599 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: VCA.



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| Value added multiplier analysis of V18 expenditure | | | | | | | | |
|--|-------------------|--|-------------------|--------------------|-------------------|-------------------|-----------------------------|--|
| Expenditure item | Expense (€) | Expenditure category | Type I multiplier | Type II multiplier | Direct effect | Direct + indirect | Direct + indirect + induced | |
| Direct operating expenses | 8,346,316 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 0.49 | 0.58 | 8,346,316 | 4,089,695 | 4,840,863 | |
| Salaries and wages | 468,135 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 0.49 | 0.58 | 468,135 | 229,386 | 271,518 | |
| Social Security Contributions | 193,089 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 0.49 | 0.58 | 193,089 | 94,614 | 111,992 | |
| | | D35 - Electricity, gas, steam and air conditioning supply | 0.18 | 0.29 | - | - | - | |
| | | E36 - Water collection, treatment and supply | 0.77 | 1.08 | - | - | - | |
| | | E37-E39 - Sewerage; waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services | 0.69 | 0.98 | - | - | - | |
| Utilities | 60,826 | Average | 0.55 | 0.78 | 60,826 | 33,252 | 47,647 | |
| Material and Supplies | 58,064 | G46 - Wholesale trade, except of motor vehicles and motorcycles | 0.80 | 1.09 | 58,064 | 46,451 | 63,290 | |
| Repair and Upkeep | 42,499 | C33 - Repair and installation of machinery and equipment | 0.70 | 1.18 | 42,499 | 29,749 | 50,149 | |
| Rent | 141,920 | N77 - Rental and leasing activities | 0.76 | 0.93 | 141,920 | 107,859 | 131,985 | |
| Office Services | 14,524 | N80-N82 - Security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support activities | 0.78 | 1.22 | 14,524 | 11,329 | 17,719 | |
| | | H51 - Air transport | 0.46 | 0.74 | - | - | - | |
| | | H50 - Water transport | 0.52 | 0.71 | - | - | - | |
| | | H49 - Land transport and transport via pipelines | 0.69 | 0.88 | - | - | - | |
| Travel | 56,114 | Average | 0.56 | 0.78 | 56,114 | 31,237 | 43,582 | |
| Information services | 995,406 | J62-J63 - Computer programming, consultancy and related activities; information service activities | 0.65 | 0.87 | 995,406 | 647,014 | 866,003 | |
| Contractual services | 607,214 | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 0.49 | 0.58 | 607,214 | 297,535 | 352,184 | |
| | | K64 - Financial service activities, except insurance and pension funding | 0.79 | 1.24 | - | - | - | |
| | | M69-M70 - Legal and accounting activities; activities of head offices; management consultancy activities | 0.84 | 1.07 | - | - | - | |
| | | M73 - Advertising and market research | 0.59 | 0.83 | - | - | - | |
| | | M74-M75 - Other professional, scientific and technical activities; veterinary activities | 0.56 | 0.72 | - | - | - | |
| Professional services | 120,088 | Average | 0.70 | 0.97 | 120,088 | 83,461 | 115,885 | |
| Hospitality | 10,951 | I - Accommodation and food service activities | 0.65 | 0.93 | 10,951 | 7,118 | 10,184 | |
| Total | 11,115,145 | | | | 11,115,145 | 5,708,698 | 6,923,001 | |

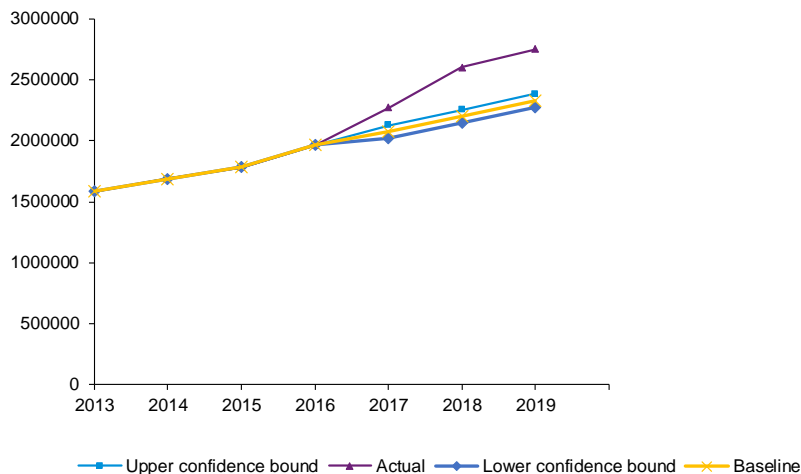
Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: VCA.

5 Spending Group 2: Additional expenditure by Tourists

Tourists' expenditure is another important determinant when considering total economic impact. However, one must only include tourist expenditure which is additional to the normal expenditure one would expect in a counterfactual scenario without V18. As such, under this category, we are only considering tourists who visited Malta specifically because of V18.

Sultana and Saliba (2018)¹³ indicate that an estimated 13.4% of total inbound tourists during 2018 were motivated to visit Malta due to the V18 Programme. This translates to a total of 348,500 tourists during 2018 according to the report – a substantial number considering the ever-increasing influx of inbound tourism to Malta. In fact, if one extrapolates inbound tourists using data from 2013 to 2016, the extrapolated 2017 and 2018 figures fall short of the actual figures, indicating an increase well above the expected trend line¹⁴. This lends credence to the hypothesis that a number of visitors actually visited Malta because of V18. In fact, the difference between actual inbound tourists in 2018 and extrapolated upper bound tourism in the same year is of 346,858, which is quite close to the figure as estimated in the MTA report.

Actual vs 'Projected' Inbound Tourists (EU2017 and V18 counterfactual)



Source: NSO data; KPMG Analysis

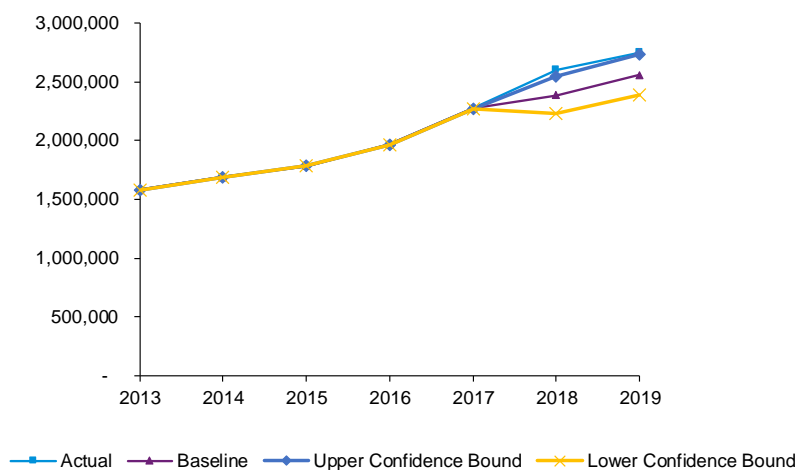
If, on the other hand, extrapolations are calculated on the basis of historical data from 2013 to 2017, the gap between the extrapolated baseline and the actual figure is less, at

¹³ T. Sultana and R. Saliba, (2018), The Impact of Valletta 2018 on the Tourism Sector, Malta Tourism Authority

¹⁴ The extrapolation was estimated using Microsoft Excel's in-built exponential smoothing algorithm, which assigns decreasing weights to data points farther away in the past. It is pertinent to note that 2017 was also the year of the Maltese Presidency of the Council of the EU, which would have attracted inbound tourism. It is specifically for this reason that we extrapolate inbound tourism based on years 2013 – 2016, noting that 2017 and 2018 were exceptional years.

around 216,000. This is because 2017 was an exceptionally good year for tourism, and this pushes up the extrapolated number for 2018.

Actual vs 'Projected' Inbound Tourists (V18 counterfactual)



Source: NSO data; KPMG Analysis

In this respect, the report cited above goes on to reveal that these tourists have spent an average of 6.5¹⁵ nights in Malta with a total combined expenditure of €376 million (an average of €166.15 per capita per night, which is higher than the general average of €117.27 recorded for 2018¹⁶). Tourism statistics for 2018¹⁶ outline spend across three expenditure categories: 'Air/sea fares'¹⁷, 'Accommodation' and 'Other'. Relative proportions of tourist spend for these three categories were calculated with such proportions being applied to the V18 tourist total expenditure. These expenditure items were mapped to the respective industries and multipliers were applied to elicit the direct, indirect and induced economic impact¹⁸.

5.1 Output multipliers

In terms of direct expenditure, tourists spent €376.38 million, split between air/sea fares (€112.47 million), accommodation (€126.61 million) and 'Other' (€137.30 million). The total spend on air/sea fares was then reduced to account for the fact that not all tourists

¹⁵ This is in line with the average nights recorded for 2018 (6.88 nights, calculated as a weighted average for 2018)

¹⁶ Source: NSO Inbound Tourism Press Releases for 2018

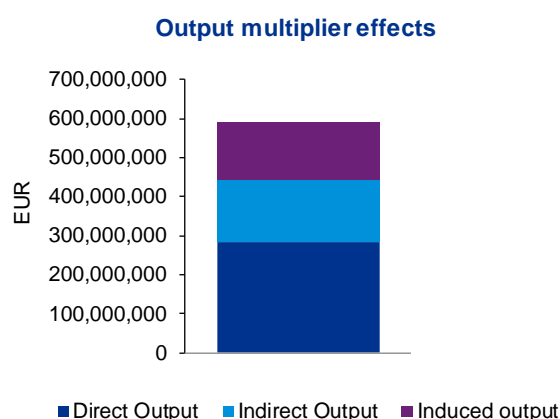
¹⁷ Since this category includes flights booked with foreign airline operators, part of this expenditure is excluded.

¹⁸ It was assumed that the 'Other' category is equally distributed between transport, entertainment and catering and therefore, an average of the pertinent industry multipliers was applied.

use Air Malta – it was estimated that circa 25% of inbound tourists use the Maltese national airline¹⁹. Applying the respective multipliers to the total spend of €282.01 million²⁰ results in an additional €162.71 million in indirect effects, and €146.47 million in induced effects, for a total combined effect of €591.20 million.

| Output multiplier analysis of tourist expenditure driven by Valletta 2018 | | | | | | | | |
|---|--------------------|--|-------------------|--------------------|--------------------|--------------------|-----------------------------|--|
| Expenditure item | Expense (€) | Expenditure category | Type I multiplier | Type II multiplier | Direct effect | Direct + indirect | Direct + indirect + induced | |
| Air fares | 18,099,557 | H51 - Air transport | 1.79 | 2.41 | 18,099,557 | 32,398,206 | 43,619,931 | |
| Accommodation | 126,613,888 | I - Accommodation and food service activities | 1.63 | 2.25 | 126,613,888 | 206,380,638 | 284,881,249 | |
| | | H49 - Land transport and transport via pipelines | 1.53 | 1.95 | - | - | - | |
| | | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 1.34 | 1.54 | - | - | - | |
| | | I - Accommodation and food service activities | 1.63 | 2.25 | - | - | - | |
| Other | 137,296,973 | Average | 1.50 | 1.91 | 137,296,973 | 205,945,459 | 262,694,875 | |
| Total | 282,010,418 | | | | 282,010,418 | 444,724,304 | 591,196,055 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: Air Malta p.l.c Annual Report and Consolidated Financial Statements, 31.3.18; NSO Inbound Tourism statistics; T. Sultana and R. Saliba, (2018), The Impact of Valletta 2018 on the Tourism Sector, Malta Tourism Authority.



Source: KPMG Analysis

5.2 Value added multipliers

When one considers value added, the effect is smaller due to the exclusion of intermediate consumption. The initial expenditure of €282.01 million would have

¹⁹ This is based on the following assumptions: Total inbound to Malta International Airport – 3,404,216; Total inbound tourists in 2018 - 2,604,014; Total inbound using Air Malta (tourists and Maltese) – 850,000 (based on 1.7m total movements comprising outbound and inbound); Ratio of tourists to Maltese through MIA – 76% vs 24%; Tourists through Air Malta thus estimated at 650,197 = 76% x 850,000, assuming ratio of tourists to MIA arrivals is reflective of Air Malta customer base, i.e. 25% of tourists are estimated to have used Air Malta (650,197/2,604,014).

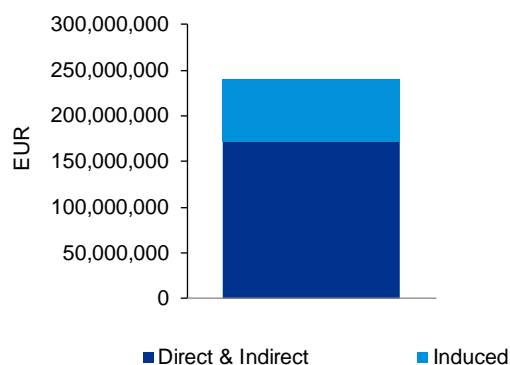
²⁰ Note that the estimate of air fares is arrived at by multiplying the cost of an average Air Malta ticket (estimated at €208 for a return ticket) with the proportion of estimated tourists using the national airline.

generated a total of €240.52 million in value added, split between Direct and Indirect effects (€171.63 million) and Induced effects (€68.89 million).

| Value added multiplier analysis of tourist expenditure driven by Valletta 2018 | | | | | | | | |
|--|--------------------|--|--|-------------------|--------------------|--------------------|-----------------------------|-------------|
| Expenditure item | Expense (€) | Expenditure category | | Type I multiplier | Type II multiplier | Direct + indirect | Direct + indirect + induced | |
| Air fares | 18,099,557 | H51 - Air transport | | 0.46 | 0.74 | 8,325,796 | 13,393,672 | |
| Accommodation | 126,613,888 | I - Accommodation and food service activities | | 0.65 | 0.93 | 82,299,028 | 117,750,916 | |
| | | H49 - Land transport and transport via pipelines | | 0.63 | 0.88 | - | - | |
| | | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | | 0.49 | 0.58 | - | - | |
| | | I - Accommodation and food service activities | | 0.65 | 0.93 | - | - | |
| Other | 137,296,973 | | | Average | 0.59 | 0.80 | 81,005,214 | 109,379,922 |
| Total | 282,010,418 | | | | | 171,630,038 | 240,524,510 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: Air Malta p.l.c Annual Report and Consolidated Financial Statements, 31.3.18; NSO Inbound Tourism statistics; T. Sultana and R. Saliba, (2018), The Impact of Valletta 2018 on the Tourism Sector, Malta Tourism Authority.

Value added multiplier effects



Source: KPMG Analysis

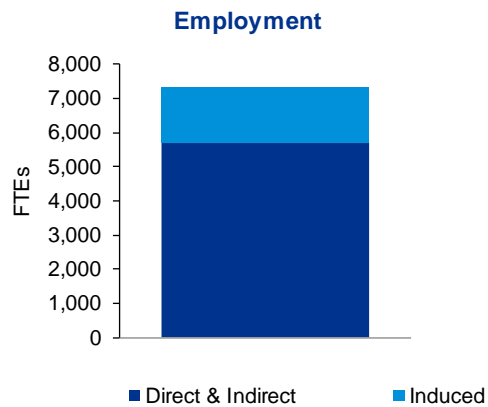
5.3 Employment multipliers

When one considers employment multipliers, the additional tourist expenditure of €282.01 million would have generated a total combined 7,336 Full Time Equivalents (FTEs), comprising direct, indirect and induced employment as shown in the table below.

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| Employment multiplier analysis of tourist expenditure driven by Valletta 2018 | | | | | | | |
|---|--------------------|--|-------------------|--------------------|------------------------|----------------------------------|--|
| Expenditure item | Expense (€) | Expenditure category | Type I multiplier | Type II multiplier | Direct + indirect FTEs | Direct + indirect + induced FTEs | |
| Air/Sea Fares | 18,099,557 | H51 - Air transport | 14 | 21 | 253 | 380 | |
| Accommodation | 126,613,888 | I - Accommodation and food service activities | 23 | 30 | 2,912 | 3,798 | |
| | | H49 - Land transport and transport via pipelines | 27 | 32 | - | - | |
| | | R90-R92 - Creative, arts and entertainment activities; gambling and betting activities libraries, archives, museums and other cultural activities; | 5 | 7 | - | - | |
| | | I - Accommodation and food service activities | 23 | 30 | - | - | |
| Other | 137,296,973 | Average | 18.33 | 23.00 | 2,517 | 3,158 | |
| Total | 282,010,418 | | | | 5,683 | 7,336 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: Air Malta p.l.c Annual Report and Consolidated Financial Statements, 31.3.18; NSO Inbound Tourism statistics; T. Sultana and R. Saliba, (2018), The Impact of Valletta 2018 on the Tourism Sector, Malta Tourism Authority.



Source: KPMG Analysis

6 Spending Group 3: Additional investment expenditure by Government and private investors

Over the six years leading to 2018, both Government and the private sector invested circa € 167 million, with a strong emphasis (around 47%) on investment in cultural heritage regeneration (such as embellishment of open spaces).²¹

In a report by the Economic Policy Department (EPD) it was noted that in 2018 alone, Government and private sector invested around € 32 million, consisting of non-residential investment (€ 15.4 million), heritage investment (€ 15 million), and residential investment (€ 1.6 million).²² This investment is over and above the expenditure incurred by VCA, with the report stating that:

“The estimates present only the short-term effects of investment activity in Valletta. They should not be construed as the impact of Valletta 2018, which involved many more activities apart from investment in the physical infrastructure. Hence, they exclude the economic activity generated by the various events organised by Valletta 2018, including the cultural events. It also excludes the activity that has been made possible as a result of the operations of these investments. For instance, it does not capture the tourist activity that has taken place by every boutique hotel developed or office renovated in Valletta during this period. This should be purely considered as the short-term impact of the capital investment”

The report continues to estimate the following key figures:

- Total investment from 2013 to 2018: € 167 million (this excludes “*the economic activity generated subsequently by the Valletta 2018 events and projects*”). Out of this total, approximately two thirds constitute investment by Government, with the rest considered as a spill-over effect, being investment by the private sector in hospitality, offices, and wholesale and retail space.
- Additional investments of € 57 million between 2013 and 2018.
- Total cumulative impact on GDP estimated at € 89 million in nominal terms.

The above implies that the average Value-Added Type II multiplier is around 0.5323. This is because significant leakages would have occurred, as is expected in open economies, due to the large import element inherent in much of the final expenditures. The analysis hereunder proceeds on the assumption that a) such an expenditure would not have taken place in the absence of V18²⁴ and b) only expenditure which has taken place in 2018 is considered in order to achieve a like-with-like comparison with other spending groups throughout 2018²⁵.

²¹ Valletta 2018 Investment Survey, Economic Policy Department.

²² Figures are approximate, using investment shares provide by EPD report.

²³ However, note that the EPD methodology for deriving the multiplier is different to the one being used in this report, and therefore results may vary.

²⁴ Though, as the EPD report indicates, “*Whilst it is difficult to attribute such activity exclusively to the ECOC title and the investment in culture and heritage, few activities are known to have substantially shaped activity in Valletta differently from the rest of the country*”

²⁵ Although some investment to prepare for V18 would have taken place in prior years.

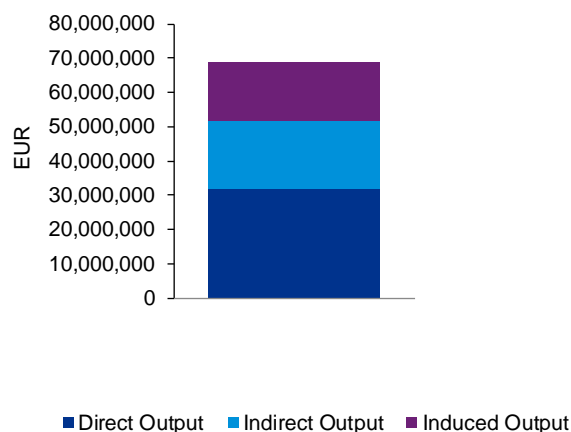
6.1 Output multipliers

When one considers generation of output, the initial spend of circa €32 million is estimated to have generated an additional €19.87 million in indirect expenditure, as well as a further €17.07 million in induced expenditure, for a total combined output of €68.94 million. This is tabulated and illustrated below:

| Output multiplier analysis of Government and private sector expenditure driven by Valletta 2018 | | | | | | | | |
|---|-------------------|---|-------------------|--------------------|-------------------|-------------------|-----------------------------|------------|
| Expenditure item | Expense (€) | Expenditure category | Type I multiplier | Type II multiplier | Direct effect | Direct + indirect | Direct + indirect + induced | |
| Heritage | 15,040,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 1.69 | 2.19 | | | - |
| | | | | 1.54 | 2.09 | | | - |
| | | | Average | 1.62 | 2.14 | 15,040,000 | 24,289,600 | 32,185,600 |
| Leisure | 4,800,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 1.69 | 2.19 | | | - |
| | | | | 1.54 | 2.09 | | | - |
| | | | Average | 1.62 | 2.14 | 4,800,000 | 7,752,000 | 10,272,000 |
| Tourism | 5,120,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 1.69 | 2.19 | | | - |
| Office | 1,920,000 | M71 - Architectural and engineering activities; technical testing and analysis | | 1.54 | 2.09 | | | - |
| | | | | 1.62 | 2.14 | 5,120,000 | 8,268,800 | 10,956,800 |
| | | | Average | 1.69 | 2.19 | 1,920,000 | 3,244,800 | 4,204,800 |
| Food and Drink | 1,600,000 | M71 - Architectural and engineering activities; technical testing and analysis I - Accommodation and food service activities | F - Construction | 1.69 | 2.19 | | | - |
| | | | | 1.54 | 2.09 | | | - |
| | | | | 1.63 | 2.25 | | | - |
| | | | Average | 1.62 | 2.18 | 1,600,000 | 2,592,000 | 3,482,667 |
| Dwellings | 1,600,000 | M71 - Architectural and engineering activities; technical testing and analysis O84 - Public administration and defence; compulsory social security | F - Construction | 1.69 | 2.19 | | | - |
| | | | | 1.54 | 2.09 | | | - |
| | | | | 1.42 | 2.53 | | | - |
| | | | Average | 1.55 | 2.27 | 1,600,000 | 2,480,000 | 3,632,000 |
| Other | 1,920,000 | F - Construction | 1.69 | 2.19 | 1,920,000 | 3,244,800 | 4,204,800 | |
| Total | 32,000,000 | | | | 32,000,000 | 51,872,000 | 68,938,667 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources; Bugeja and Vella, 2019, 'Valletta 2018 Investment Survey, Economic Policy Department.

Output multiplier effects



Source: KPMG Analysis

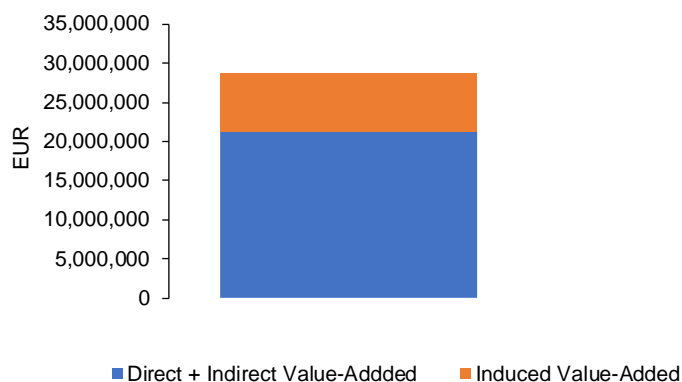
6.2 Value Added multipliers

In terms of value added, estimates indicate that the initial €32 million in investment would have left a total of €28.73 million in the economy, combining indirect and induced value-added. Out of these, €21.24 million represent direct and indirect value-added, as tabulated below.

| Value added multiplier analysis of Government and private sector expenditure driven by Valletta 2018 | | | | | | | |
|--|-------------------|---|-------------------|--------------------|-------------------|-----------------------------|------------|
| Expenditure item | Expense (€) | Expenditure category | Type I multiplier | Type II multiplier | Direct + indirect | Direct + indirect + induced | |
| Heritage | 15,040,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 0.60 | 0.82 | - | - |
| | | | | 0.74 | 0.98 | - | - |
| | | | Average | 0.67 | 0.90 | 10,076,800 | 13,536,000 |
| Leisure | 4,800,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 0.60 | 0.82 | - | - |
| | | | | 0.74 | 0.98 | - | - |
| | | | Average | 0.67 | 0.90 | 3,216,000 | 4,320,000 |
| Tourism | 5,120,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 0.60 | 0.82 | - | - |
| | | | | 0.74 | 0.98 | - | - |
| | | | Average | 0.67 | 0.90 | 3,430,400 | 4,608,000 |
| Office | 1,920,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 0.60 | 0.82 | 1,152,000 | 1,574,400 |
| | | | | 0.60 | 0.82 | - | - |
| | | | Average | 0.60 | 0.82 | - | - |
| Food and Drink | 1,600,000 | M71 - Architectural and engineering activities; technical testing and analysis I - Accommodation and food service activities | F - Construction | 0.60 | 0.82 | - | - |
| | | | | 0.74 | 0.98 | - | - |
| | | | Average | 0.66 | 0.91 | 1,061,333 | 1,456,000 |
| Dwellings | 1,600,000 | M71 - Architectural and engineering activities; technical testing and analysis O84 - Public administration and defence; compulsory social security | F - Construction | 0.60 | 0.82 | - | - |
| | | | | 0.74 | 0.98 | - | - |
| | | | Average | 0.82 | 1.32 | - | - |
| Other | 1,920,000 | M71 - Architectural and engineering activities; technical testing and analysis | F - Construction | 0.60 | 0.82 | 1,152,000 | 1,664,000 |
| | | | | 0.60 | 0.82 | 1,152,000 | 1,574,400 |
| | | | Average | 0.72 | 1.04 | - | - |
| Total | 32,000,000 | | | | 21,240,533 | 28,732,800 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources; Bugeja and Vella, 2019, 'Valletta 2018 Investment Survey, Economic Policy Department.

Value added and income multipliers



Source: KPMG Analysis

6.3 Employment multipliers

If one then considers employment multipliers, estimates show an increase of around 726 FTEs, constituting direct and indirect employment. An additional 192 FTEs was estimated, constituting induced employment. This contrasts heavily with the FTE estimate of the EPD report, estimating the creation of 153 additional FTEs.

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| Employment multiplier analysis of Government and private sector expenditure driven by Valletta 2018 | | | | | | |
|---|-------------------|--|-------------------|--------------------|------------------------|----------------------------------|
| Expenditure item | Expense (€) | Expenditure category | Type I multiplier | Type II multiplier | Direct + indirect FTEs | Direct + indirect + induced FTEs |
| Heritage | 15,040,000 | F - Construction | 27 | 32 | - | - |
| | | M71 - Architectural and engineering activities; technical testing and analysis | 17 | 24 | - | - |
| | | Average | 22 | 28 | 331 | 421 |
| Leisure | 4,800,000 | F - Construction | 27 | 32 | - | - |
| | | M71 - Architectural and engineering activities; technical testing and analysis | 17 | 24 | - | - |
| | | Average | 22 | 28 | 106 | 134 |
| Tourism | 5,120,000 | F - Construction | 27 | 32 | - | - |
| | | M71 - Architectural and engineering activities; technical testing and analysis | 17 | 24 | - | - |
| | | Average | 22 | 28 | 113 | 143 |
| Office | 1,920,000 | F - Construction | 27 | 32 | 52 | 61 |
| | | F - Construction | 27 | 32 | - | - |
| | | M71 - Architectural and engineering activities; technical testing and analysis | 17 | 24 | - | - |
| Food and Drink | 1,600,000 | I - Accommodation and food service activities | 23 | 30 | - | - |
| | | Average | 22 | 29 | 36 | 46 |
| | | F - Construction | 27 | 32 | - | - |
| Dwellings | 1,600,000 | M71 - Architectural and engineering activities; technical testing and analysis | 17 | 24 | - | - |
| | | O84 - Public administration and defence; compulsory social security | 26 | 39 | - | - |
| | | Average | 23 | 32 | 37 | 51 |
| Other | 1,920,000 | F - Construction | 27 | 32 | 52 | 61 |
| Total | 32,000,000 | | | | 726 | 918 |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources; Bugeja and Vella, 2019, 'Valletta 2018 Investment Survey, Economic Policy Department.

7 2019 – the aftermath

Tracing the effects of V18 on 2019 can be challenging for the following reasons:

- The existing literature on V18 covers the period up till 2018, and thus, we were unable to use data points and insight from such reports as part of our desk-based research
- Primary data collection in this regard was beyond the scope of this research study
- 2019 was an exceptional year, in that several protests during the last two months of the year affected business. This is an important ‘confounding factor’ which is difficult to disentangle from other thrusts (positive and/or negative) driving business.

Nevertheless, this report attempts to provide a few data points which will give an indication of the momentum created by V18. Focusing on the three key spending groups, the following points are worth mentioning:

7.1 VCA and V18 Foundation 2019 budget

Both VCA and V18 Foundation had a 2019 expenditure budget of €3.2 million and €6.2 million respectively, for a total budget of €9.4 million. This is less than 2018’s actual spend of €11.1 million, but still a significant budget to ensure momentum is kept at a steady pace. Applying weighted average multipliers for output, value-added and employment would be expected to result in a total impact of circa €15 million in output, €5.8 million in value-added, and 141 FTEs. The detail is listed below:

| Output multiplier analysis for budgeted 2019 expenditure | | | | | | | |
|--|------------------|---------------------------|----------------------------|------------------|------------------|------------------|-------------------|
| | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct effect | Indirect effect | Induced effect | Total Output |
| VCA | 3,200,000 | 1.37 | 1.62 | 3,200,000 | 1,194,316 | 777,899 | 5,172,215 |
| V18 Foundation | 6,200,000 | 1.37 | 1.62 | 6,200,000 | 2,313,987 | 1,507,180 | 10,021,166 |
| Total | 9,400,000 | | | 9,400,000 | 3,508,302 | 2,285,079 | 15,193,381 |

| Value added multiplier analysis for budgeted 2019 expenditure | | | | | | |
|---|------------------|---------------------------|----------------------------|-------------------|------------------|------------------|
| | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct + indirect | Induced | Total VA |
| VCA | 3,200,000 | 0.51 | 0.62 | 1,643,509 | 349,592.20 | 1,993,101 |
| V18 Foundation | 6,200,000 | 0.51 | 0.62 | 3,184,298 | 677,334.88 | 3,861,633 |
| Total | 9,400,000 | | | 4,827,806 | 1,026,927 | 5,854,733 |

| Employment multiplier analysis for budgeted 2019 expenditure | | | | | | |
|--|------------------|---------------------------|----------------------------|------------------------|--------------|------------|
| | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct + indirect FTEs | Induced FTEs | Total FTEs |
| VCA | 3,200,000 | 6.22 | 8.79 | 20 | 28 | 48 |
| V18 Foundation | 6,200,000 | 6.22 | 8.79 | 39 | 54 | 93 |
| Total | 9,400,000 | | | 59 | 83 | 141 |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: Financial Estimates Draft 2020: ‘Malta Inkomplu Nikbru Fliimkien’.

7.2 Additional Tourists.

There are many forces driving the number of tourists visiting Malta – cost, quality of life, heritage, weather, amongst others. Therefore, it is difficult to attempt to attribute changes in growth rates of tourism to one particular factor (such as having had Valletta as the European Culture of Capital). However, one method to estimate such an effect is to ‘extrapolate’ the trajectory of tourists using historical data prior to a major event.

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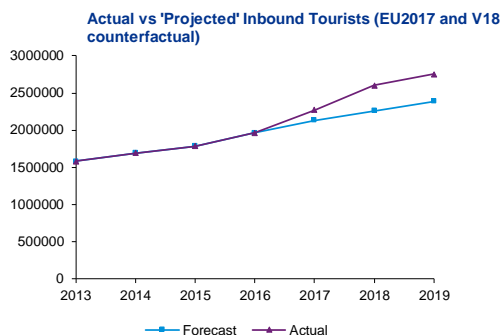
Extrapolations are then compared to actuals to elicit gaps, attributing such gaps to the hosting of the major event. This method assumes that growth rates would have continued on the same path, and that no other major competing (in the opposite or same direction) factor was present in the 'extrapolation period'.

A data point which gives validity to this approach in this specific scenario of V18 is that the estimated gap using this method approximated the number of tourists who said they visited Malta because of V18 (MTA survey).

We continue with this methodology to estimate the effect of V18 on inbound tourists in 2019.

If one considers both 2017 and 2018 as exceptional years (with 2017 being the year in which Malta was given the EU Presidency), then the estimated gap between actual inbound tourists in 2019 and the extrapolated upper bound inbound tourists in 2019 using historical data from 2013 to 2016, would be around 368,312, which is higher than the gap registered in 2018.

Using this assumption, it can be estimated that the total value-added in 2019 as a result of additional tourists would be around €254 million, with the creation of around 7,700 jobs (including direct, indirect and induced employment).



Source: KPMG Analysis; NSO Inbound Tourism

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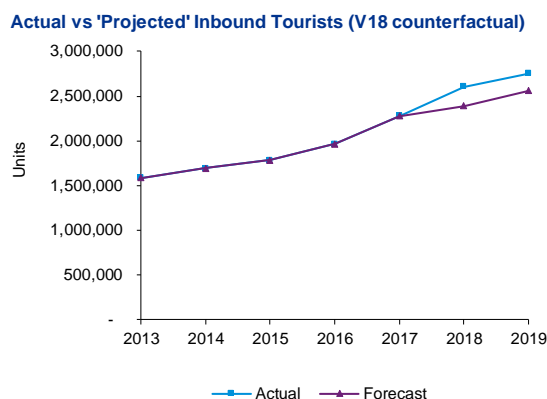
| Output multiplier analysis for additional tourists in 2019 | | | | | | | | | | |
|--|--------------------|------------------------------|--------------------|---------------------------|----------------------------|--------------------|--------------------|--------------------|--------------------|--|
| Estimated Additional tourists | Expense per capita | Expense per capita per night | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct effect | Indirect effect | Induced effect | Total Output | |
| 368,312 | 809.21 | 124.49 | 298,042,553 | 1.58 | 2.10 | 298,042,553 | 171,964,080 | 154,798,589 | 624,805,221 | |
| Total | | | 298,042,553 | | | 298,042,553 | 171,964,080 | 154,798,589 | 624,805,221 | |

| Value added multiplier analysis for additional tourists in 2019 | | | | | | | | |
|---|--------------------|------------------------------|--------------------|---------------------------|----------------------------|-------------------|------------|--------------------|
| Estimated Additional tourists | Expense per capita | Expense per capita per night | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct + indirect | Induced | Total VA |
| 368,312 | 809.21 | 124.49 | 298,042,553 | 0.61 | 0.85 | 181,387,110 | 72,811,085 | 254,198,194 |
| Total | | | 298,042,553 | | | | | 254,198,194 |

| Employment multiplier analysis for additional tourists in 2019 | | | | | | | | | |
|--|--------------------|------------------------------|--------------------|---------------------------|----------------------------|------------------------|--------------|--------------|--|
| Estimated Additional tourists | Expense per capita | Expense per capita per night | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct + indirect FTEs | Induced FTEs | Total FTEs | |
| 368,312 | 809.21 | 124.49 | 298,042,553 | 20.15 | 26.01 | 6,006 | 1,748 | 7,753 | |
| Total | | | 298,042,553 | | | 6,006 | 1,748 | 7,753 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: NSO Inbound Tourism statistics.

If on the other hand, one considers 2017 as part of the historical data being used to project inbound tourism, then the gap would be lower at around 193,000 additional tourists. This would be expected to generate circa €133.7 million in value-added and around 4,000 additional FTEs.



Source: KPMG Analysis; NSO Inbound Tourism

| Output multiplier analysis for additional tourists in 2019 | | | | | | | | | | |
|--|--------------------|------------------------------|--------------------|---------------------------|----------------------------|--------------------|-------------------|-------------------|--------------------|--|
| Estimated Additional tourists | Expense per capita | Expense per capita per night | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct effect | Indirect effect | Induced effect | Total Output | |
| 193,676 | 809.21 | 124.49 | 156,724,906 | 1.58 | 2.10 | 156,724,906 | 90,426,867 | 81,400,438 | 328,552,211 | |
| Total | | | 156,724,906 | | | 156,724,906 | 90,426,867 | 81,400,438 | 328,552,211 | |

| Value added multiplier analysis for additional tourists in 2019 | | | | | | | | |
|---|--------------------|------------------------------|--------------------|---------------------------|----------------------------|-------------------|------------|--------------------|
| Estimated Additional tourists | Expense per capita | Expense per capita per night | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct + indirect | Induced | Total VA |
| 193,676 | 809.21 | 124.49 | 156,724,906 | 0.61 | 0.85 | 95,381,943 | 38,287,521 | 133,669,463 |
| Total | | | 156,724,906 | | | | | 133,669,463 |

| Employment multiplier analysis for additional tourists in 2019 | | | | | | | | | |
|--|--------------------|------------------------------|--------------------|---------------------------|----------------------------|------------------------|--------------|--------------|--|
| Estimated Additional tourists | Expense per capita | Expense per capita per night | Expense (€) | Average Type I multiplier | Average Type II multiplier | Direct + indirect FTEs | Induced FTEs | Total FTEs | |
| 193,676 | 809.21 | 124.49 | 156,724,906 | 20.15 | 26.01 | 3,158 | 919 | 4,077 | |
| Total | | | 156,724,906 | | | 3,158 | 919 | 4,077 | |

Source: KPMG Analysis using Input-Output Tables from Cassar, 2015. Data sources: NSO Inbound Tourism statistics.

7.3 Spill-over from V18 – private and public investment

It is pertinent to note that the impact estimated as a result of expenditure in 2018 would be expected to permeate and spill-over onto 2019. The further rounds of spending discussed in the previous sections would not take place with immediate effect, but rather over a period of months or years depending on the extent of the initial spend. Thus, both the demand being created (through expenditure by various identified spending groups and the subsequent rounds of expenditure) and the supply being provided (supply in the widest sense in the form of a more attractive, culturally rich and vibrant Capital City, encapsulating the public and private investment intended to increase gravity and appreciation towards Valletta) would be expected to result in sustained momentum during 2019 and beyond.

A Appendix: NACE Rev 2 definitions

| NACE Rev 2 Section R - Arts, entertainment and recreation | | |
|---|--|--|
| Division | Activity | |
| 90 | | Creative, arts and entertainment activities |
| | 90.0 | Creative, arts and entertainment activities |
| | 90.01 | <i>Performing arts</i> |
| | 90.02 | <i>Support activities to performing arts</i> |
| | 90.03 | <i>Artistic creation</i> |
| | 90.04 | <i>Operation of arts facilities</i> |
| 91 | | Libraries, archives, museums and other cultural activities |
| | 91.0 | Libraries, archives, museums and other cultural activities |
| | 91.01 | <i>Library and archives activities</i> |
| | 91.02 | <i>Museums activities</i> |
| | 91.03 | <i>Operation of historical sites and buildings and similar visitor attractions</i> |
| | 91.04 | <i>Botanical and zoological gardens and nature reserves activities</i> |
| 92 | | Gambling and betting activities |
| | 92.0 | Gambling and betting activities |
| | 92.00 | <i>Gambling and betting activities</i> |
| 93 | | Sports activities and amusement and recreation activities |
| | 93.1 | Sports activities |
| | 93.11 | <i>Operation of sports facilities</i> |
| | 93.12 | <i>Activities of sport clubs</i> |
| | 93.13 | <i>Fitness facilities</i> |
| | 93.19 | <i>Other sports activities</i> |
| | 93.2 | Amusement and recreation activities |
| | 93.21 | <i>Activities of amusement parks and theme parks</i> |
| 93.29 | <i>Other amusement and recreation activities</i> | |

Source: NACE Rev. 2: Statistical classification of economic activities in the European Community, Eurostat, Methodologies and Working Papers, 2008



Contact us

David Pace

Partner, Head of Advisory

T +356 2563 1000

E davidpace@kpmg.com.mt

Roberto Vitale

Associate Director, Advisory

T +356 2563 1098

E robertovitale@kpmg.com.mt

Steve Stivala

Associate Director, Advisory

T +356 2563 1052

E stevestivala@kpmg.com.mt

www.kpmg.com.mt

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