FEATURE ARTICLE

IMPACT OF ENTERPRISE SINGAPORE'S GRANTS ON FIRMS' REVENUE AND EXPORTS

INTRODUCTION

The Capability Development Grant (CDG), Global Company Partnership (GCP) grant and Market Readiness Assistance (MRA) grant are financial assistance schemes managed by Enterprise Singapore, with the CDG and GCP having been merged to form the Enterprise Development Grant (EDG) with effect from October 2018. Prior to merging with the GCP, the CDG aimed to help small- and medium-sized enterprises (SMEs) in Singapore build internal capabilities across areas ranging from productivity improvement and human capital development to service excellence. The GCP aimed to encourage Singapore companies to internationalise and become globally competitive. It did so by helping companies to defray the eligible costs of their overseas expansion projects in the areas of capability building, market access and manpower development. As for the MRA, it was launched in 2013 to help SMEs take the first steps in their internationalisation journey.

INTERNATIONALISATION GRANTS

CDG

Build internal capabilities across areas ranging from productivity improvement and human capital to service excellence

GCP

Encourage Singapore companies to internationalise and become globally competitive

MRA

Encourage SMEs to take first steps in their internationalisation journey

FINDINGS

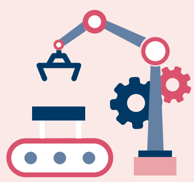
Using firm-level administrative data from the Department of Statistics and grant disbursement data from Enterprise Singapore, this study examines the impact of CDG, GCP grant and MRA grant on firms' revenue and exports.

CDG generally led to an improvement in firm-level outcomes, with statistically significant **increases in revenue and total exports** observed for the average firm that received the CDG.

The GCP and MRA also achieved their objectives of encouraging firms to deepen and take their first steps to internationalise respectively, with the grant recipients achieving **growth in both revenue and total exports**.

POLICY TAKEAWAY

To remain relevant and competitive, our companies must press on to adapt, transform, and seize opportunities as countries around the world reopen their borders, and the global economy restarts its engine. The Government remains committed to supporting companies in their internationalisation and transformation efforts.



EXECUTIVE SUMMARY

- Using firm-level administrative data from the Department of Statistics and grant disbursement data from Enterprise Singapore, this study examines the impact of the Capability Development Grant (CDG), Global Company Partnership (GCP) grant and Market Readiness Assistance (MRA) grant on firms' revenue and exports.

- Our findings showed that the CDG, which supported firms in a diverse range of capability upgrading projects, led to higher firm-level revenue and total exports.

- Similarly, the GCP, which aimed to encourage firms to deepen their international presence, and the MRA, which supported firms to take their first steps into overseas markets, were found to have positive effects on firm-level outcomes. In particular, both GCP and MRA recipients saw an increase in total exports and revenue due to the grants.

- To remain relevant and competitive, our companies must press on to adapt, transform and seize opportunities as countries around the world reopen their borders, and the global economy restarts its engine. The Government remains committed to supporting companies in their internationalisation and transformation efforts.

The views expressed in this paper are solely those of the authors and do not necessarily reflect those of the Ministry of Trade and Industry (MTI), Enterprise Singapore (ESG) or the Government of Singapore.[1]

INTRODUCTION

The Capability Development Grant (CDG), Global Company Partnership (GCP) grant and Market Readiness Assistance (MRA) grant are financial assistance schemes managed by Enterprise Singapore, with the CDG and GCP having been merged to form the Enterprise Development Grant (EDG) with effect from October 2018. These grants play an important role in the Government's efforts to deepen companies' capabilities so that they can capture growth opportunities, and also support their transformation efforts.

Prior to merging with the GCP, the CDG aimed to help small- and medium-sized enterprises (SMEs) in Singapore build internal capabilities across areas ranging from productivity improvement and human capital development to service excellence.[2] CDG supported up to 50 per cent of eligible equipment and hardware costs and 70 per cent of all other qualifying costs[3].

Before the merger with the CDG, the GCP aimed to encourage Singapore companies to internationalise and become globally competitive. It did so by helping companies to defray the eligible costs of their overseas expansion projects in the areas of capability building, market access and manpower development. Specifically, the GCP supported up to 70 per cent of qualifying costs for SMEs and up to 50 per cent for non-SMEs.

1 *We would like to thank ESG for their inputs to this study and acknowledge the statistical support from the Department of Statistics. We would also like to acknowledge the contributions of Mr Christopher Saw, Ms Geraldine Lim and Ms Ong Swee Joo to the study, and thank Ms Yong Yik Wei for her useful suggestions and comments. All errors belong to the authors.*

2 *Project areas covered by the CDG included Branding & Marketing, Business Model Transformation, Productivity Improvement, Human Capital Development, Product Development, Service Excellence, Intellectual Property, Financial Management and Standards Adoption.*

3 *Examples of eligible expenses included hardware and software expenses, equipment expenses, employee salaries, and consultancy services.*

With the streamlining of the CDG and GCP into the EDG, the EDG will continue with the respective schemes' objectives of helping companies to upgrade their capabilities and venture overseas.

As for the MRA, it was launched in 2013 to help SMEs take the first steps in their internationalisation journey. MRA provides up to 70 per cent funding support for qualifying activities to help SMEs promote their products and services, identify business partners and set up overseas.

To ensure the continued relevance of the Government's assistance schemes, it is important to periodically review the effectiveness of the schemes in strengthening our companies' capabilities. This study evaluates the impact of the CDG, GCP grant and MRA grant on recipients' revenue and total exports.

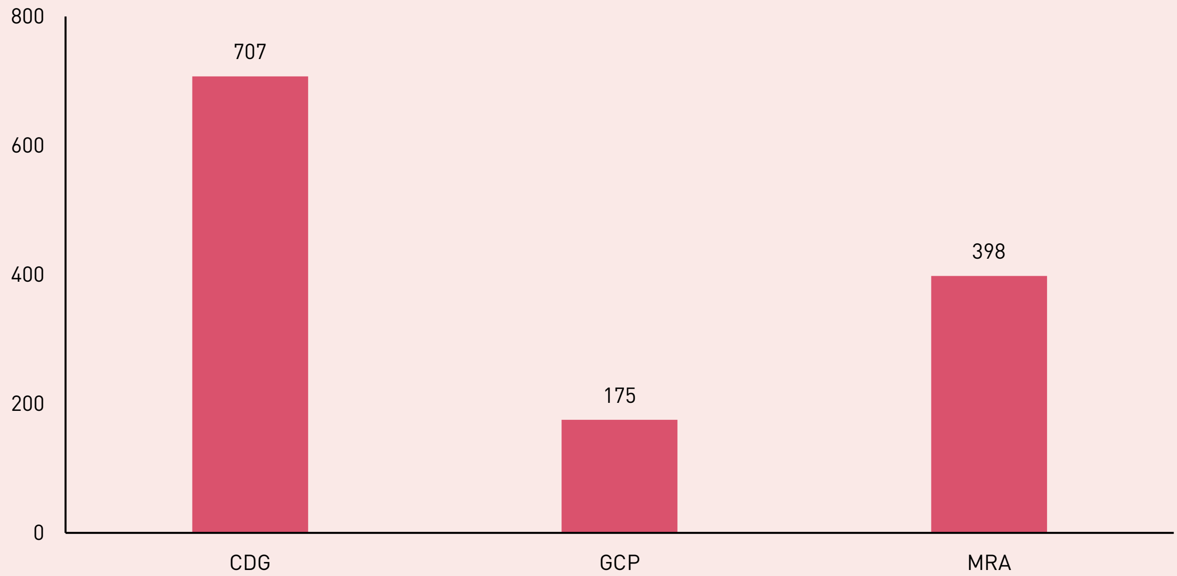
DATA

This study taps on firm-level administrative data from the Department of Statistics and grant data from Enterprise Singapore. The analysis sample is restricted to employing firms with available revenue data, and includes both grant recipients and non-recipients. The schemes are evaluated over the period of 2009-2018[4].

SUMMARY STATISTICS

Across the years where the grants were active, CDG had the largest average number of recipients per year (Exhibit 1). As for the profile of the grant recipients, CDG recipients tended to be similar to the non-recipients in terms of revenue size, but were less export-oriented than them. On the other hand, GCP recipients tended to be larger in terms of revenue and more export-oriented compared to non-recipients. Meanwhile, MRA recipients tended to be smaller and less export-oriented than non-recipients (Exhibits 2 and 3).

Exhibit 1: Average Number of Recipients[5] Per Year, Over Period Where Grant Was Active from 2009 to 2018



Source: Department of Statistics, Enterprise Singapore and Authors' estimates

4 *The coverage of the MRA grant is between 2013 and 2018, as the MRA was launched in 2013.*
5 *As firms can receive grants for different projects across the years, the number of recipients in any given year may include firms that had received grants in other years.*

Exhibit 2: Average Revenue of Recipients and Non-Recipients by Scheme Over Period that Grant Was Active

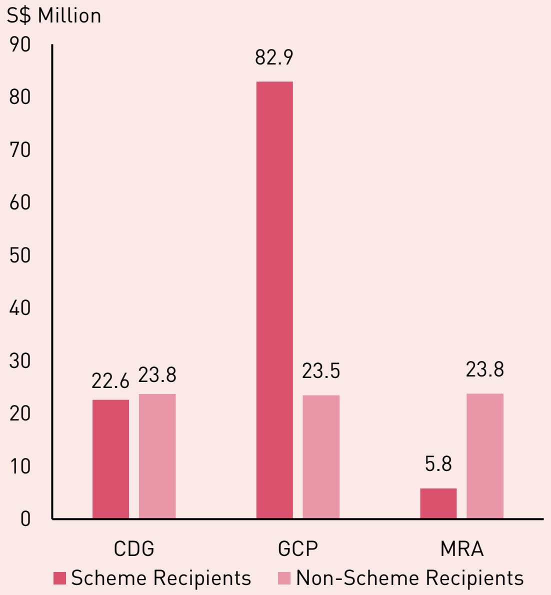
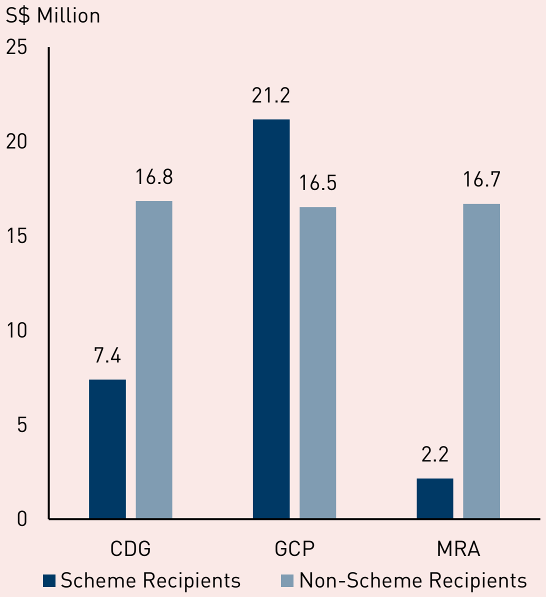


Exhibit 3: Average Total Exports of Recipients and Non-Recipients by Scheme Over Period that Grant Was Active



Source: Department of Statistics, Enterprise Singapore and Authors' estimates

EMPIRICAL METHODOLOGY

To study the causal impact of the grant schemes on firm-level outcomes, we adopt the fixed effects (FE) regression approach[6]. The FE approach controls for unobserved firm-specific factors that are time-invariant during the period of analysis (i.e., 2009 to 2018) such as managerial quality and organisational culture, as well as year fixed effects (e.g., macroeconomic shocks that affect all firms in a particular year). In addition, our regression model includes controls for observable characteristics of the firms such as their industry and ownership status. To isolate the effect of the grant being studied, our model also takes into account other grants that had been taken up by the same firm from 2009 up to the current year to control for the effects of these grants on the firm.[7]

Our regression specification is as follows, and the coefficient of interest (β) can be interpreted as the impact of the specific grant being studied on recipient firms as compared to similar firms that did not receive the grant:

$$\log(Outcome)_{it} = \beta \log(grant)_{it} + \xi \log(total\ excl\ grant)_{it} + X_{it} + \alpha_i + \theta_t + \varepsilon_{it}$$

Where:

- $Outcome_{it}$ represents the firm-level outcomes for firm i in year t: revenue and total exports.
- $grant_{it}$ represents the cumulative amount of the grant disbursed to firm i from 2009 up to, and including, year t.
- $totalexclgrant_{it}$ represents the cumulative amount of other grants (i.e., excluding the grant under study) disbursed to firm i from 2009 up to, and including, year t.
- X_{it} represents the set of controls for the firm, including ownership status and industry for firm i.
- α_i and θ_t represents the firm-level and year fixed effects, respectively.
- β measures the average per annum impact of an increase in the cumulative grant amount on firm-level outcomes.
- ε_{it} is the error term.

6 As our sample includes non-recipient firms, this approach differs from Chua et al. (2015), which evaluated the impact of CDG between 2005 and 2015 by restricting the sample to only CDG recipients. Chua et al. (2015) exploited differences in the timing of when firms embarked on CDG projects to evaluate the impact on revenue.

7 These would also include the grants that are not examined in our study (e.g., Wage Credit Scheme (WCS) and Innovation and Capability Voucher (ICV)).

RESULTS

CDG

The CDG generally led to an improvement in firm-level outcomes, with statistically significant increases in revenue and total exports observed for the average firm that received the CDG. In particular, an additional grant of average amount resulted in a 3.1 per cent increase in the firm's revenue and a 2.5 per cent increase in its total exports compared to similar firms that did not receive the grant (Exhibit 4).

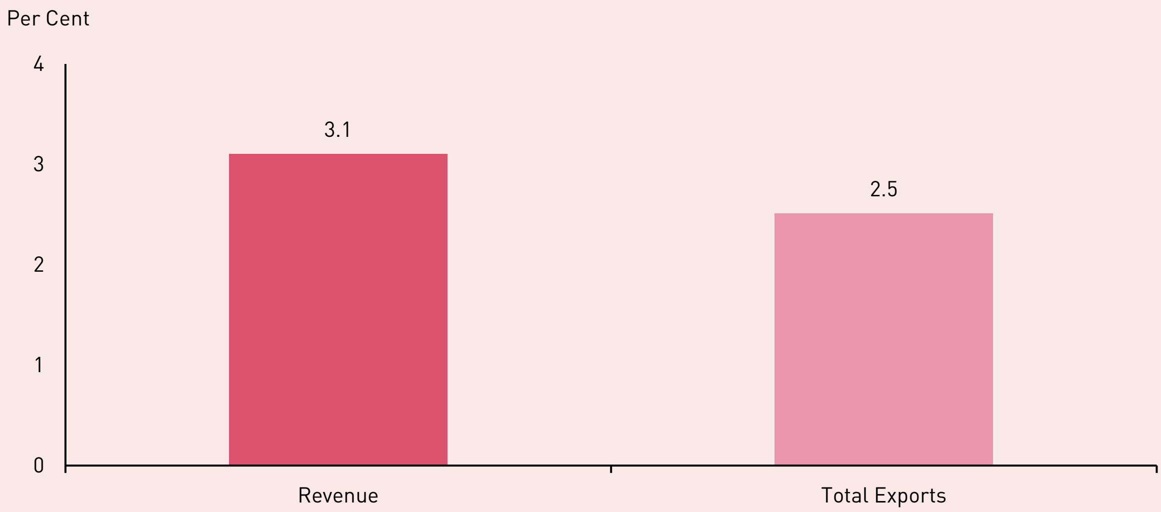
GCP

The GCP also led to an improvement in firm-level outcomes, with the average GCP grant recipient observing statistically significant increases in revenue and total exports. Specifically, an additional grant of average amount resulted in a 1.8 per cent increase in the recipient firm's revenue compared to similar firms that did not receive the grant (Exhibit 5). In line with the policy intent to promote internationalisation, the GCP also led to higher exports, with the additional grant of average amount translating to a 1.0 per cent increase in the firm's total exports.

MRA

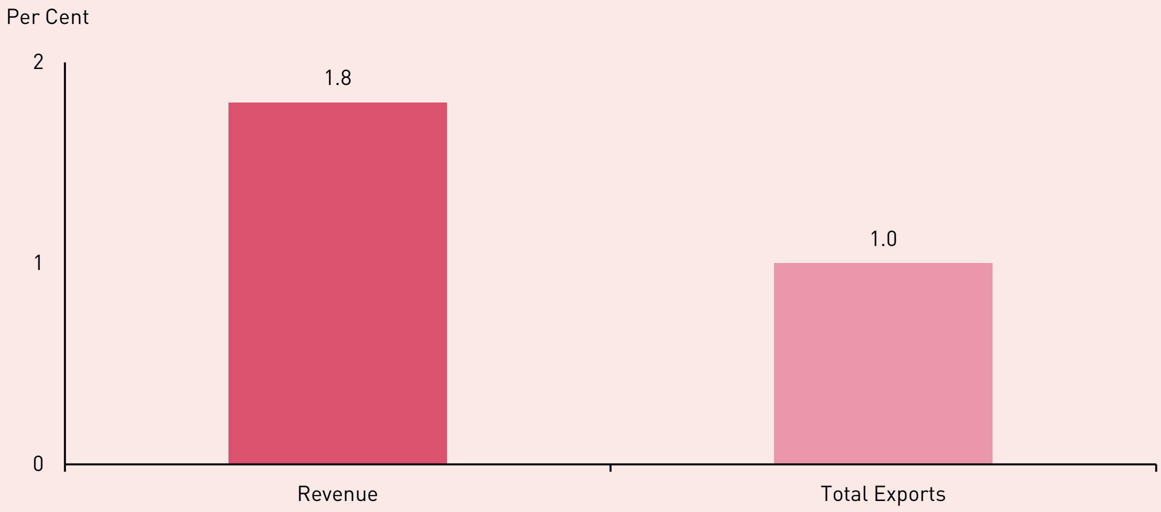
For the MRA, which supports firms in the early stages of internationalisation, the average MRA grant recipient saw statistically significant increases in both revenue and total exports. In elasticity terms, an additional grant of average amount led to a 5.3 per cent increase in the recipient firm's revenue and a 4.4 per cent increase in its total exports compared to similar firms that did not receive the grant (Exhibit 6).

Exhibit 4: Percentage Change in Firm-Level Outcomes From An Additional Grant of Average Amount for CDG Recipients Compared to Similar Non-Recipients



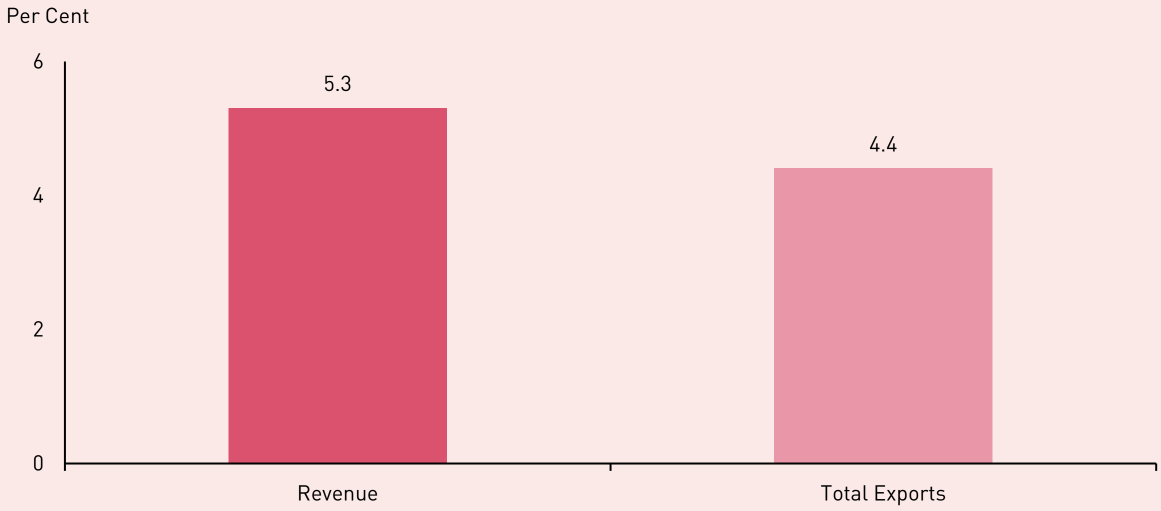
Source: Authors

Exhibit 5: Percentage Change in Firm-Level Outcomes From An Additional Grant of Average Amount for GCP Recipients Compared to Similar Non-Recipients



Source: Authors

Exhibit 6: Percentage Change in Firm-Level Outcomes From An Additional Grant of Average Amount for MRA Recipients Compared to Similar Non-Recipients



Source: Authors

CONCLUSION

Our study finds that the CDG, GCP grant and MRA grant had led to improvements in key firm-level outcomes for grant recipients. In particular, the CDG succeeded in its intent of helping enterprises to upgrade their capabilities, which in turn led to increased competitiveness and hence improvements in their revenue and exports.

The GCP and MRA also achieved their objectives of encouraging firms to deepen and take their first steps to internationalise respectively, with the grant recipients achieving growth in both revenue and total exports. MRA grant recipients enjoyed particularly strong growth in total exports, given the high marginal returns to investment arising from the support for direct go-to-market activities.

To remain relevant and competitive, our companies must press on to adapt, transform and seize emerging opportunities as countries around the world reopen their borders, and the global economy restarts its engine. The Government remains committed to supporting companies in their internationalisation and transformation efforts.

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