Studieprogramrapport 2020

Årlig evaluering av studieprogram

Studieprogrammet:	
Studieprogram:	Master in Economics
Programrådsleder:	Roberto Garcia
Fakultet:	Handelshøyskolen
Rapporten er behandlet i:	☒ Programrådet ☐ Fakultetets studieutvalg/utdanningsutvalg ☐ Fakultetsstyret
Eventuelle merknader:	Click or tap here to enter text.

Background data for the study program report:

Enter the most important data sources used in the evaluation of the program.

Data sources used in this report:

- NOKUT, Study barometer survey 2019
- Felles studentsystem, FS [Centralized student database]
- STAR, Tableau
- Database for Statistics on Higher Educations (DBH)
- Norwegian Universities and Colleges Admission Service (NUCAS)
- Annual Report for the M-ECON Study Program, 2019

Assessment of the quality of the study program:

Quality areas for assessment (see NMBUs studiekvalitetsområder):

- Admissions (Recruitment, information, admission, acceptance)
- Framework quality (Physical, organizational and psycho-social learning environment and the academic environment surrounding the education)
- Program design and management (Study content, organization and management)
- Learning (Educational competence, learning and assessment forms, students' own efforts and other factors that contribute to learning)
- Relevance (Education's relevance to society, work life and long-term value creation
- Learning outcomes (Students' academic performance, learning outcomes, and progression)

Admissions

Table 1 presents statistics on admissions. Reported are the number of applicants to the M-ECON program who listed NMBU as their first choice, the number of offers that were made to all candidates (regardless of the whether or not NMBU was their first choice), the number of "yes-replies" in response to an offer, and the number of candidates that actually registered. The data are disaggregated by international and domestic applicants. In 2019 the number of international applicants continued its increase since the sharp fall experienced in 2016. International applications in 2020 matched those in 2019. Applications from Norwegian residents in 2019 were slightly lower than in previous years, but the total number of first-choice applicants held steady. In 2020, however, there was a

51% increase in the number of Norwegian applicants to more than 100 (from under 70 in the three previous years). This accounts for the rise in the application rates to levels that were reached in the first half of the 2010s (Annual Report, 2019).

Table 1. Admissions: number of applications, offers, acceptance and registrants

		First-choice of applicant	Offers made, all candidates	"Yes"-reply by all	Candidates registered, all
	International	88	11	10	5
2016	Norway	73	28	17	14
	Total	**161**	**39**	**27**	**19**
	International	115	19	10	5
2017	Norway	68	23	10	9
	Total	**183**	**42**	**20**	**14**
	International	142	32	21	9
2018	Norway	69	35	16	14
	Total	**211**	**67**	**37**	**23**
	International	153	24	7	7
2019	Norway	66	35	17	12
	Total	**219**	**59**	**24**	**19**
	International	154	24	10	8
2020	Norway	103	48	14	8
	Total	**257**	**72**	**24**	**16**

Source: FS101.001 and FS101.006

The number of offers made in 2019 (59) was lower than in 2018 despite fewer first-choice applicants. Registered candidates numbered 19, the average of the previous six years despite a lower yes-response from the international applicants. In 2020, the decade-high number of offers (72) reflects the increase in Norwegian applicants, though the registration rate fell to 16.

The M-ECON program appeals to applicants from across the globe. Table 2 presents the distribution of international applications in 2019 and 2020.

Table 2. Geographical distribution of international applicants, 2019 and 2020

Country	**First-choice applicants 2019**		**First-choice applicants 2020**	
	Total	**Percent**	**Total**	**Percent**
Ghana	53	34,6	46	29,9
Nigeria	11	7,2	17	11,0
Pakistan	15	9,8	17	11,0
Bangladesh	10	6,5	11	7,1
Iran	5	3,3	8	5,2
China	4	2,6	8	5,2
Cameroon	7	4,5	5	3,2
Kenya	4	2,6	5	3,2
Nepal	7	4,5	5	3,2
All other countries	37	24,2	32	20,8
Sum	153	100,0	154	100,0

Source: FS101.001

However, in recent years, the School has attracted strong interest from candidates from West Africa (Ghana and Nigeria in particular) and from Pakistan and Bangladesh in Asia. In 2019 and 2020 these four countries accounted for about 60% of the total of international applications. Europe and North America account for a large share of the applications from all other countries.

The program also recruits from across Norway, but again applicants are concentrated by region. In table 3, the geographical distribution of Norwegian applicants is reported. Two counties, Oslo and Viken, account for about two-thirds of the first-choice applicants and the percentage of all applicants.

Table 3. Geographical distribution of Norwegian applicants

County	**First-choice applicants**				**All Norwegian applicants**			
	Total		Percent		Total		Percent	
	2020	2019	2020	2019	2020	2019	2020	2019
Oslo	44	22	42,7	33,3	111	82	39,1	37,8
Viken	27	20	26,2	30,3	93	60	32,7	27,6
Trøndelag	7	4	6,8	4,5	11	7	3,9	3,2
Vestfold og Telemark	5	3	4,9	4,5	13	12	4,6	5,5
Rogaland	5	2	4,9	3,0	12	9	4,2	4,2
Nordland	4		3,9		5		1,8	
Innlandet	2	3	1,9	4,5	10	11	3,5	5,1
Vestland	2	3	1,9	4,5	11	10	3,9	4,6
Troms og Finnmark					3		1,1	
Agder		4		6,1	3	9	1,1	4,1
Møre og Romsdal					2	4	0,7	0,2
Unknown	7	8	6,8	12,1	10	8	3,5	3,7
Sum	103	66	100,0	100,0	284	217	100,0	100,0

Source: FS: 192.002

One possible explanation for the increasing trend in the total number of applicants could be related to the lowering of the minimum grade-point-average (GPA) requirement since 2016, as presented in table 4. However, application rates among first-choice international candidates were much higher in 2013 and 2014 (165 and 223, respectively) when the GPA requirement was still at 3,30, and the Norwegian applications reached 98 in 2015 at that higher GPA. The implications of the lowering of the GPA is addressed under student performance.

Table 4. GPA requirement

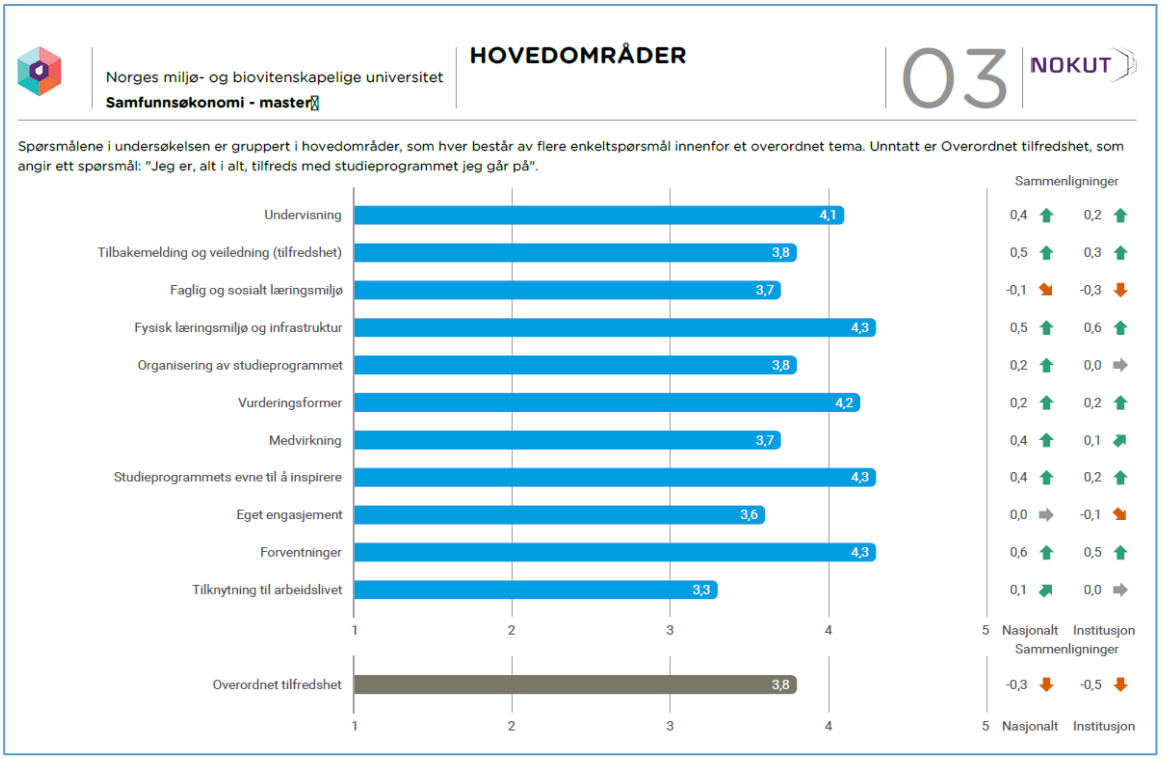
Year	**GPA requirement**
2016	3,30
2017	3,25
2018	3,25
2019	3,00
2020	3,00

Overall, the trends in admissions and new registrants, both by international and domestic candidates, is positive and the offers and yes-replies suggest an increased interest in the program. For the 2020-22 cycle, this comes despite the continued constraints imposed by Covid-19-related restrictions.

Framework for quality assurance

The framework for quality assurance is assessed through a questionnaire undertaken in a national survey (Study Barometer Report) conducted by NOKUT (Norwegian Agency for Quality Assurance in Education). In chart 1, NOKUT's survey questions are grouped into 11 main categories, each of which consists of several individual questions, and an overall ranking based on one question related to the rate of overall satisfaction of the study program. The scores are based on rankings that range from '1' (meaning strongly disagree) to '5' (meaning strongly agree).

Chart 1. Student survey questionnaire scores of the program, by category and overall satisfaction



Source: NOKUT, Study barometer survey 2019

The results of the 2019 survey show that the M-ECON program scored an average of greater than 4,0 in five of the 11 categories. Students view positively the instruction they received (an average score of 4,1) and appear to have clear what is expected of them (4,3). This is reinforced by the positive view toward the method of evaluating their performance (4,2). Also scoring well is the physical learning environment and infrastructure (4,3). This is capped by the ability of the study program to inspire the student, receiving an average score of 4,3.

In the six categories scoring less than 4,0 the average scores were 3,7 or 3,8 in four of those categories. The lowest average scores were for the student's own engagement (3,6) and the relevance of the program to work life (3,3). The score for the overall satisfaction of

the program averaged 3,8 which was about at the average of the scores across all 11 categories at 3,9.

Comparing the 2019 results with those from 2018 shows that where M-ECON scores best represents an improvement over 2018. The overall satisfaction scored the same as in 2018. However, relative to 2017, the 2019 results improve across all categories and for the level of overall satisfaction (Annual Report, 2019).

Nevertheless, there remains a paradox in the results as students score the instruction and their evaluation favorably. Moreover, they indicate that the program inspires them (4,3), yet they score their own commitment as 3,6. The most notable result is for the relevance to working life, a theme this report will address in the action plan.

In chart 2, the M-ECON program at NMBU is compared with like programs at two other universities in Norway and against the national average of all economics programs. The average scores are provided for seven categories and an overall assessment.

Chart 2. National comparisons of student assessment scores across indicators, 2019

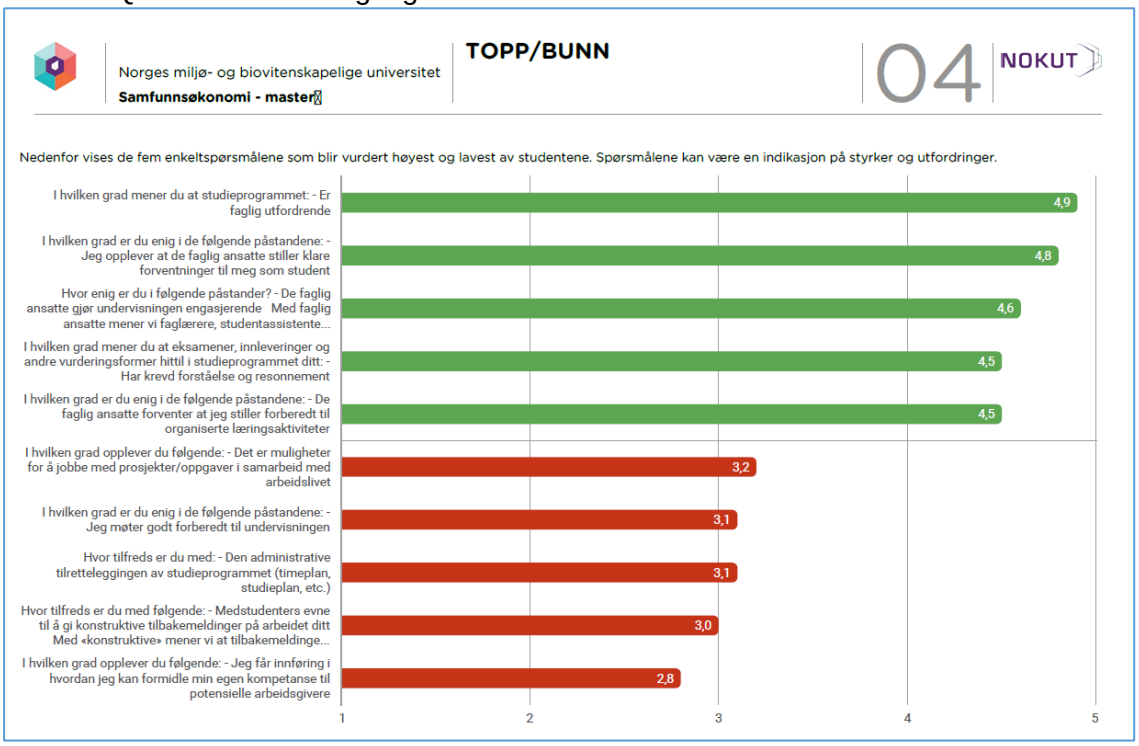
Source: NOKUT, Study barometer survey 2019

For each category NMBU scores an average of 3,9 or higher. Relative to 2018, NMBU's scores are the same or improve across each category except organization (Annual Report, 2019). NMBU scores higher than the national average for economics programs, and even much higher than the other two featured programs, for all seven categories,

except for working life for which there are insufficient respondents to make a comparison. Again, a similar paradox appears. The overall assessment scores an average of 3,8, lower than any individual score. NMBU's overall score matches the University of Oslo's despite their scores being at or below 3,8 for the seven categories. Likewise, the University of Bergen's program receives an overall score of 3,6 despite scoring at or below 3,6 in all categories.

In chart 3, the results of NOKUT's survey questionnaire highlights the highest and lowest scores received by NMBU's M-ECON program. The highest scores received are for the program being: professionally challenging; where the academic staff set clear expectations for the student; through engaging teaching; requiring assignments/exams that demonstrate understanding and reasoning; and by expecting the student be prepared to participate in organized learning activities.

Chart 3. Questions receiving highest and lowest scores from student evaluations



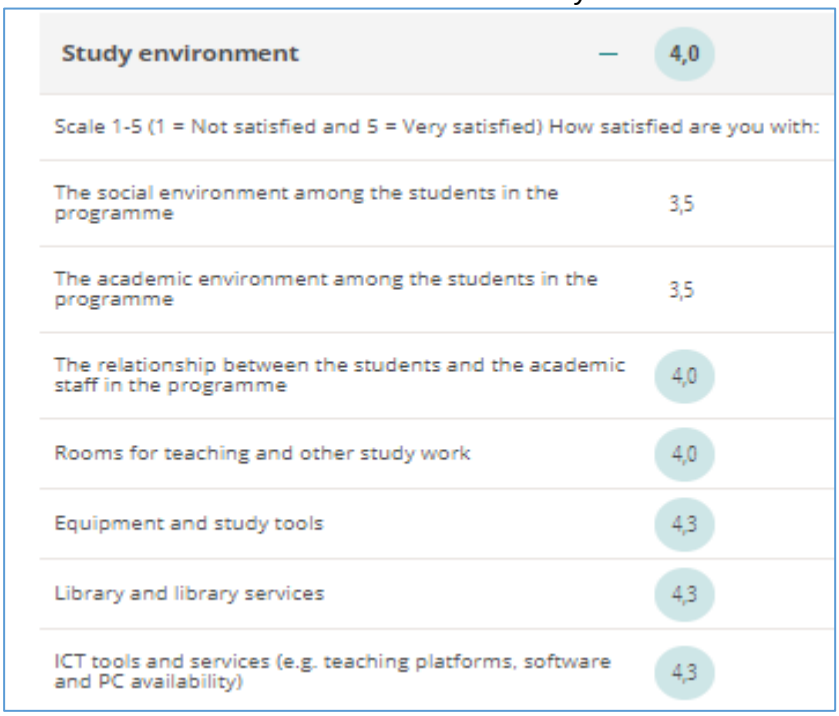
Source: NOKUT, Study barometer survey 2019

The low scores are given for the program not providing students: opportunities to work on projects / tasks in collaboration with working life; sufficient administrative facilitation; and confidence for them to convey their competence to potential employers. Low scores are also given on self-evaluation of the student being prepared for classes and evaluating a fellow students' ability to provide constructive feedback on the student's work.

Lastly, chart 4 provides more specific information on the learning environment for the student. The scores suggest that the students are satisfied, to a large extent, with their relationship with the academic staff, the lecture halls and their study space, the equipment and supporting services (library, teaching platforms, software, etc.). The scores on all these indicators is above 4,0, which matches the average score for the overall study environment. The lowest average score (3,5) was given for the social environment among the students in the program and the academic environment among the students in the program. Perhaps this result provides some insight into the paradoxes noted earlier. The

students have generally noted being satisfied with the academic side of the program in terms of teaching, learning activities, evaluation methods used by instructors, the physical study environment and the supporting services. However, the academic side of a university study is not the whole life of a student. Student comradery and social cohesion within and outside the classroom have been identified as a weakness and will continue to be a challenge with the physical-distancing requirements under the Covid-19 restrictions. The cultural differences among students from Norway and the international students, mostly from Africa and Asia, adds to the challenge of fostering comradery and having students living away from campus and commuting does not facilitate social cohesion. The program council of M-ECON was discussing measures to address the social life among students when the Covid-19-related restrictions took effect. This continues to be an issue to be addressed by the council.

Chart 4. Scores on the indicators of the study environment



Study environment	—	4,0
Scale 1-5 (1 = Not satisfied and 5 = Very satisfied) How satisfied are you with:		
The social environment among the students in the programme		3,5
The academic environment among the students in the programme		3,5
The relationship between the students and the academic staff in the programme		4,0
Rooms for teaching and other study work		4,0
Equipment and study tools		4,3
Library and library services		4,3
ICT tools and services (e.g. teaching platforms, software and PC availability)		4,3

Source: NOKUT, Study barometer survey 2019

Program design and management:

Study content

The study content of the 2020 M-ECON program is mostly the same as in 2019 with two important differences. The program still requires that a candidate complete 120 ECTS, consisting of 90 ECTS in coursework and 30 ECTS from a written thesis and its oral defense. Candidates can choose between specializing in any of four areas profiled, rather than three as in 2019, or pursuing a general studies option by tailoring a profile that suits their interests, taking courses across the specializations and/or courses from other faculties. The specializations in the M-ECON program are:

- Environment, Climate and Energy Economics
- Development and Global Change;
- Financial and Commodity Market Analysis; and

- Agribusiness and Food Economics.

Agribusiness and food economics, a joint program with business administration, is the newly introduced specialization. It serves to take advantage of the existing synergies within the School of Economics and Business. It is the most structured of the specializations requiring courses in both business and economics with a focus on the food and agribusiness marketing system, broadly defined.

Regardless of whether a candidate specializes or chooses to purse a general studies option, there are 50 ECTS in required courses (up from 45 ECTS previously). These courses provide the theoretical (microeconomics and macroeconomics) and quantitative (math for economics, econometrics and impact assessment methods) foundation of the program, and the preparation of problem identification/development and research methods.

The specializations have required core courses ranging between 20-35 ECTS with the remainder of the ECTS (5-20 ECTS) comprised of recommended and general electives. For candidates pursuing general studies, the requirement is for the candidate to take 20 ECTS in 300-level economics courses and 20 ECTS in 200-level courses in economics or courses from other faculties.

Organization and management

The organization and management of the program, unchanged from 2019, is the responsibility of the program council, comprised of the program leader, the program leader of the B-ECON program, additional members of the economics faculty, student representatives from each class, and a representative of the administrative staff.

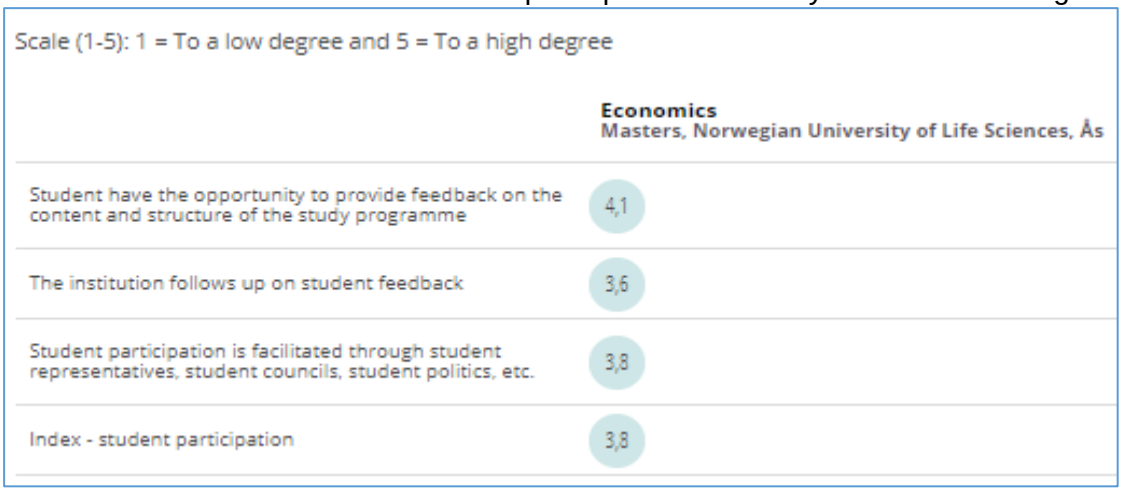
The mandate of the program council is unchanged and to fulfill the council's mandate, the program leader has the council meet regularly four times a year. The leader can call the council to meeting more often as needed.

Student participation and influence over program design

Measures are in place that encourage and permit the students for formally participate in the discussion of the program and who can influence the proposed changes in the program. This occurs through representation in the program council and through open meetings with students to discuss the general course requirements, core courses and the specializations.

The results of survey questions related to student participation, their ability to influence change, and to provide feedback related to the program are reported in chart 5. The highest score is on the opportunity to provide feedback on content and structure of the program. In academic year 2019-20, the faculty met with students in roundtables to discuss the logic of the program, specializations and courses. The lowest score is on the institution following up on student feedback. This could be frustration with the lag time of changes in response to their recommendations. Student participation through the formal institutional channels and the index of student participation both score 3,8 suggesting that there is insufficient participation on their part.

Chart 5. Scores on indicators of student participation and ability to influence change



Source: NOKUT, Study barometer survey 2019

One problem that is encountered, differing in degree from year to year, is in recruiting student representatives to the program council. In some years, it can take some months before a student agrees to serve. Then, he/she might find it difficult to motivate many of their colleagues in discussion to receive their input.

The roundtable discussions in academic year 2019-20 were a means of seeking broad-based feedback across several issues, including insight into the scores from previous student questionnaires. This is a measure that is expected to be implemented periodically.

In addition, the program council sought to implement social activities to bring faculty and students together informally, such as barbeques and an end-of-year gathering to congratulate graduates and celebrate the completion studies of the first-year class. These social events should serve as a means for students to discuss directly with faculty over a range of issues, formally and informally. Covid-19-related restrictions have limited its implementation, but the initiative remains an active discussion item on the council's agenda.

Learning

Teaching and assessment methods

Previously, there had been a push for instructors to have more required hands-on learning activities in their courses, e.g., written assignments and oral presentations through individual effort or by working in groups. These activities include problem sets, assignments, cases, reports, and semester papers or projects. In some courses the activities count toward the final grade while in others it is a means of ensuring that students are prepared to write the final exam which counts for 100% of the final grade.

During academic year 2019-20, of the 11 courses evaluated (300-level courses and 200-level prescribed economics courses) that were unaffected by the Covid-19 digital requirements (August and January blocks and the autumn semester), 10 had an overall satisfaction score of greater than 4,0 and five courses scored above 5,0. The same scores were reflected across all categories (student expectations, structure and organization, teaching, other learning activities, advising and feedback, and learning). These

evaluations suggest an improvement over the favorable impressions from the responses in the NOKUT questionnaires related to the courses, teaching and evaluation methods.

Of the five courses that were affected by Covid-19 restrictions requiring courses to switch to a digital platform in the middle of the spring semester, four courses scored above 4,0 and one scored less than 2,0. A new category was put into the evaluation to assess digital instruction. Only one instructor's course scored above 4,0, two scored above 3,0 and the other two scored below 3,0. This reflects the challenge of having to make sudden changes from physical lectures to video lectures in Zoom or Teams, virtual group work sessions, and converting physical written exams to digital take home exams. For students this also posed a challenge as more materials were provided electronically for them to "self-study" to a greater extent. The abrupt cancellation of classes on campus seemed to pose a more difficult adjustment for the students as reflected in their comments at the time.

Overall, the results of the evaluations of teaching and assessment methods suggest that students are satisfied with the new measures put in place in earlier years. However, the shift to digital instruction will continue to pose a serious challenge because: the international students have not arrived in Norway and are spread out over 12 time zones; not many of the classrooms have been well-equipped for livestreamed lectures; and the course plan for the new academic year from central administration was not circulated early enough to help instructors plan for the semester. For those courses in which a white board is an important lecturing tool, a Zoom or Teams based platform will be a second-best solution. Providing taped videos and other digital materials will require more time by the instructors and will require more "self-study" on the part of the students. Groupwork assignments will likely be more of a challenge, especially if students are unable to meet in small working groups in physical space. Instructors will likely have to spend more time on Zoom or Teams to provide feedback and advise to groups on assignments.

<u>Students' own efforts and other factors contributing to learning</u>

In addition to the challenge that a digital course poses for the instructor in terms of the learning of new technology and its effective use for their course, students will also have to make adaptations. In the NOKUT questionnaires, students have admitted to not putting in enough effort into their learning, this despite noting that the study program and the educational content has been inspiring to them. Digital courses will require even more of an effort from them as more materials will be provided electronically.

The inability to meet colleagues will make groupwork efforts more difficult and perhaps frustrating. This will be the case when international students are asked to come to Norway in January. If courses remain mostly digital, their interactions with their colleagues and society in general will impair the quality of their student experience abroad.

Relevance of the program to society and working life

From student evaluations of the program there appears to be a disconnect between the knowledge and skills that the program imparts and its relevance to society. Students are receptive to the clause in the School's mission statement "to address complex real-world problems with sustainability as a guiding principle". The measures taken in some of the core courses of the specializations (such as to involve prominent guest lectures) have been well-received. However, where the program still receives weaker scores on the questionnaires is related to working life. Students would like internships or possibilities to have more direct contact with government agencies, non-government organizations or

firms, either in the form of course-related activities or a project that can be related to their thesis. It seems as if students are not entirely clear how the information and knowledge they obtain in their courses or study program relates to the job they will be engaged in after graduation. Having them work on projects that are of interest to stakeholders outside academia is one way for the students to make that association.

Institutional mechanisms aim at supporting this. A career day has been arranged in which graduates return to campus to explain how the knowledge received at NMBU has helped them in their work and to share their experiences in interviewing for jobs and the job search. An external advisory board has also been created to get insight into what skills and knowledge is demanded by the job market. Physical distancing restrictions will likely have negatively affected the social-contact effect that these measures are expected to have, but virtual meetings will have to serve as an alternative means of addressing these concerns.

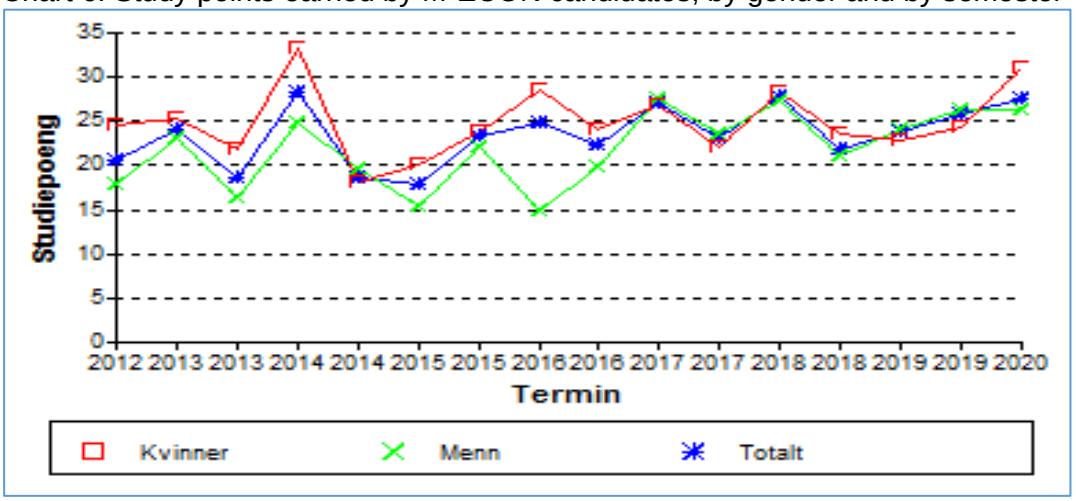
Continued attention to addressing students' inability to translate their skills and knowledge into an awareness of how they relate to the workplace must rank high on the School's list of priorities. This is discussed in the action plan.

Learning outcomes

Student progression

One measure of the appropriateness of the applicants' background for success in the M-ECON program is their study-point production, the number of credits earned by semester. The student credit production, shown in chart 6, has steadily increased for women and men since 2018. For women, the average in the spring semester of 2020 has averaged more than 30 ECTS per semester for the first time since spring semester of 2014. Male students averaged more than 25 ECTS, the highest average since the autumn semester of 2018. While the autumn and spring semester averages combined might appear to amount to just under 60 ECTS for the academic year, it must be kept in mind that students take 5 ECTS courses in the August and January block as well, suggesting that they are on track to complete their studies within the two-year academic cycle. The lowering of the GPA for admissions has not adversely affected study-point earnings.

Chart 6. Study points earned by M-ECON candidates, by gender and by semester



Source: FS 581.003

To support this assertion, table 5 shows a substantial increase in the rate of progress according to the candidate's education plan. This is measured as the actual number of study points earned relative to the number of scheduled study points under the educational plan. The 86,5% implementation rate is a marked improvement over the 2014-18 average of 81,4% (Annual Report, 2019).

Table 5. Implementation according to candidates' education plan under M-ECON (%)

2015	2016	2017	2018	2019
82,1	79,1	84,5	79,7	86,5

Source: Statistikk om Høgre Utdanning (DBH, Higher Education Database)

To measure the overall progression of students, table 6 provides an overview of the number of candidates who started the program and those who have graduated. The number of candidates that start the program averages about 20. The graduation rate, the percent of those who have completed the program relative to those who started, averaged 69% during 2015-17. The statistics for 2018 remain incomplete as there are 11 who are still listed as active. Until the results are completed for 2018, it remains inconclusive as to whether the lowering of the minimum GPA and the positive measures taken since 2018 to improve the program have had any effect on completion rates. What can be noted is that graduation rates have increased and withdrawals from the program have decreased since the first half of the 2010s (Annual Report, 2019).

The withdrawals pose the biggest challenge to the program as the class sizes start small (20 students, on average) with enough students to generate a base demand for the courses on offer. Withdrawals adversely affect the critical mass of students that the program needs.

For those having graduated, the table breaks down the amount of time it has taken students to complete the program. Most manage to complete the program within the two-year academic cycle or require one additional semester. This corroborates the results reflected in student study-point production.

Table 6. Number of candidates who started the program and graduated

Year	Started	Withdrew	Active	Graduated	Completing within 2-year cycle	Additional semesters		
						1	2	3
2015	28	9	1	18	13	2	3	0
2016	20	5	0	15	9	2	3	1
2017	12	4	0	8	6	2	0	0
2018	23	4	11	8	8	0	0	0
2019	18	0	0	0	-	-	-	-
2020	16	-	-	-	-	-	-	-

Source: Felles studentsystem

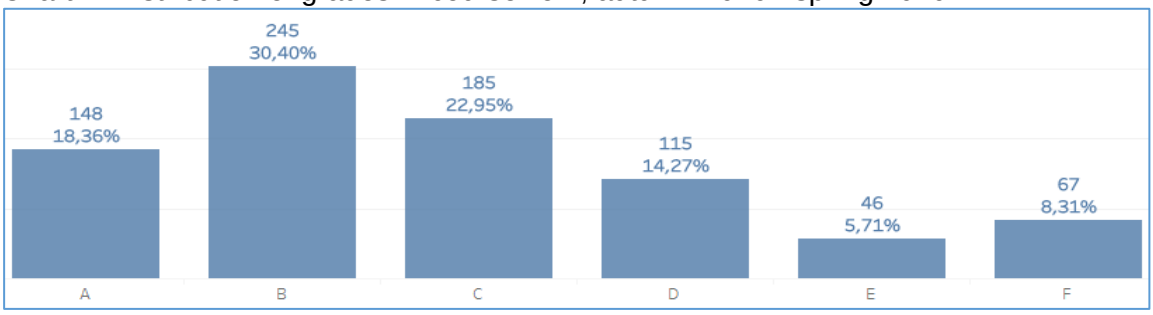
The lower registration number of 16 candidates starting the 2020-21 academic year already represents a challenge for the program. Making economics courses appealing to the business administration students will ensure a more optimal number of students in economics courses and contribute to the School's priority to take advantage of the synergies that exist across the program.

Academic performance

The most widely used indicator to assess the academic performance of the candidates is the grade awarded for a course. Instructors use a variety of methods to assess student learning, depending on the type of course. The course assessment method typically used is a written final exam, but there are also problem sets, exercises, case studies, or semester projects that are evaluated as part of the grade or as pass/fail. In some cases, the activities serve as an assessment of whether the candidate qualifies to sit for the final written exam.

In chart 7 the distribution of grades on coursework is reported. During 2016-2020, over 70% of the grades on coursework were evaluated as being a C or better. This is the same as the average for 2015-19, with a marginal improvement in the share of A grades. In addition, there was a reduction in the share of F grades, from 10% to 8%. This supports the conclusion that lowering the minimum GPA has not adversely effected the program.

Chart 7. Distribution of grades in coursework, autumn 2016 - spring 2020



Source: NMBU-prosjekt/SVP3/Karakterfordeling

Another indicator to assess student learning measures how well the coursework prepares the candidate for research and writing their master's thesis and defending the work through a presentation during its final oral defense. In general, the coursework GPA should serve as a guide for a candidate's ability to perform the tasks related to the researching and writing of a thesis. Table 7 provides some evidence of how well the performance on the master's thesis correlates with coursework GPA.

Table 7. Correlation of coursework GPA and grade received on thesis

GPA in courses	Number of candidates by GPA	Grade received on thesis				
		A	B	C	D	E
Candidates entering in 2015						
A	7	7	0	0	0	0
B	11	3	6	2	0	0
C	0	0	0	0	0	0
D	1	0	0	0	0	1
Candidates entering in 2016						
A	4	2	2	0	0	0
B	8	0	5	2	1	0
C	4	0	1	2	1	0
Candidates entering in 2017						
A	4	4	0	0	0	0
B	2	0	2	0	0	0
C	2	0	0	2	0	0
Totals	43	16	16	8	2	1

Note: includes only candidates having completed their degree.
Source: Felles Studentsystem (FS)

The results show that since 2015 the GPA on coursework is a good predictor of the grade received on the thesis. For the 43 candidates who have completed since 2015, the GPA in coursework and the grade received on the thesis are the same in 70% of the cases. This also provides some evidence that the grading system is consistent and that there is no tendency to inflate the grades on the theses. In only 9% of the cases, on average, do the grades on the thesis surpass the GPA on the coursework.

One important omission from the students' evaluation of the program is related to the quality and effectiveness of the supervision, advising and timely feedback received by the student during the writing and research of their master's thesis. Given that the thesis accounts for one-quarter of the work toward the degree, it would be useful to have some feedback on how well the courses prepared the student for their thesis and some sense for the support the candidates receive during the process of undertaking research and writing.

Recently implemented measures and their effects:

Status and effect of implemented measures (survey of action plan from last year's report and other implemented measures).

The 2020 action plan of the School of Economics and Business includes initiatives that are relevant at the M-ECON program level and related to teaching.

The program-related initiatives aim for the program to:

- Realize synergies between programs, among other things, by establishing joint specialization offers that are suitable for several master's programs;
- Streamline the master's offering, among other things, by considering courses every other year;
- Implement measures that are expected to make specializations more attractive to students as a means of increasing student numbers, including the composition of the courses set up against the needs of the labor market; and
- Identify opportunities for and possibly implement measures that integrate digitization and technological knowhow in the study programs.

The teaching-related initiatives aim for the program to:

- Conduct periodic meeting for all study programs with the main focus on revision of course names, learning objectives, learning and assessment activities; and
- Monitor the dropout rate in the study programs and intensify the work of conducting study program-specific information meetings.

Under the program-related initiatives, the most important measure taken in conformity with the action plan was the creation of the joint specialization in Agribusiness and Food Economics. The specialization falls under the business administration program but has been tailored and structured in such a manner that students under M-ECON and M-ØA can both pursue the specialization. This was a pragmatic solution to the likelihood that the M-ECON program would be unable to find a critical mass of its candidates to support the specialization. By contrast the M-ØA program could be better suited to attract enough

students to justify the offering of two new economics courses that buttress the specialization.

The core courses in this specialization includes both 300-level courses in economics and business and are common to students from both programs. Nevertheless, business and economics students must still satisfy all course requirements under their respective programs. This streamlines the administration of specializations, brings business and economics teaching faculty in closer contact, and allows business and economics students to pursue more inter-disciplinary profiles in addition to being exposed to different pedagogical methods. For the economics side of the program, such an initiative could broaden the appeal of some of its courses to the business administration students who might have avoided taking economics courses. This should help increase the class size of some of the economics courses. Furthermore, because it is a joint specialization, the core courses must be taught in English to accommodate international students enrolled in the M-ECON program. This means that more business courses are to be taught in English which gives exchange students a greater range of choice among economics and business courses.

The other major change to the program for the 2020-21 academic year is the addition of another quantitative methods course as part of the required courses. Impact assessment methods should strengthen the quantitative skills of our graduates and should provide candidates with more options for the analysis for their thesis research. Graduates equipped with stronger quantitative skills in their analytical toolbox should be an attractive feature for the labor market and should strengthen the quality of theses.

As noted earlier, the M-ECON program is particularly sensitive to the withdrawals because only an average of about 20 students enroll in the program each year. During 2019-20 an overview of the learning outcomes of required courses and core courses under the specializations was conducted to match the course description (topics, teaching methods, assignments, evaluation methods, etc.) with the learning outcomes of the M-ECON programs. Roundtable discussions were held between the relevant teaching faculty and M-ECON students to identify where courses or specialization need a realignment.

An initial meeting of the external advisory board in the autumn of 2019 laid out a plan for receiving input and feedback from former students and interested stakeholders. The plan is to have the external board members visit NMBU to meet directly with students on matters related to courses (title of courses, content, etc.) and to discuss skills sets and the needs of the labor market. The most effective manner to have this work is a roundtable discussion in physical space. If the restrictions imposed on distancing from Covid-19 cannot be lifted, the alterative will have to be a digital meeting through Teams or Zoom.

The results of a student well-being study (SHoT) reported in 2018-19 found that the School of Economics and Business scored from 48 to 63 on a scale of 0 to 100 across the various indicators (Annual Report, 2019). The indicators on which the School scored the lowest were academic guidance, teaching, the physical learning environment, the candidate's own work effort, and feedback on their own learning. The questionnaire results presented for 2019 suggest that earlier measures put into practice over the past two years have begun to address most of these weaknesses, perhaps with the exception for improving students' motivation for their own work effort and feedback on their own learning, particularly from their colleagues. The SHoT report noted that 26% of the students from the School responded that they often or very often felt outside the mainstream, felt isolated, or missed someone with whom to be. Tackling the reasons for these feelings will only be more difficult in a program that has been made digital and subjected to remote learning.

Earlier the program council encouraged adoption of measures by which students could feel part of a social and professional community right from the start of the program. At the program level, introductory courses at the start of the program were intended for the class to work in small groups with faculty mentors on themes that emphasizes the strength of the curriculum, e.g., sustainability. At the course level, more groupwork has become the rule not the exception. Courses offered early in the program (ECN302 Math for Economists), would serve to have the class meet and work together on assignments. At the same time, social outings and events with first- and second-year students and with the economics faculty were to be arranged to re-enforce social cohesion and group dynamics. While Covid-19 distancing requirements made some of the measures aimed to improve social interaction of the class inoperable (including even holding graduation in physical space), the council will have to redouble its efforts to find a solution to this, especially as the international students enrolled in the program find their way to campus in January 2021.

Faculty action plan with measures and responsibility for follow up:

The input of the faculty / academic community into measures to increase the quality of the program. Give special attention to:

- Program-specific measure for increased implementation
- Program-specific measure for student mobility
- Program-specific measure for improvement of the students learning environment

Faculty action plan

The faculty action plan focuses the priority on study programs and teaching. Under the program-specific measures, the goal is to intensify the work to exploit synergies in teaching, especially between M-ECON and M-ØA. Two specializations under the M-ØA (Energy, Natural Resources and Environment, or ENRE, and Agribusiness and Food Economics) are starting up in academic year 2020-21. The ENRE program encourages business administration students to take existing economics courses to create a business profile in important sectors for the Norwegian economy and which are relevant for sustainability in a business and economics context. Agribusiness and Food Economics is a joint specialization requiring core courses in business and economics targeted at an important sector of any economy. The joint nature of the specialization requires more coordination among the relevant faculty members across the programs.

Nevertheless, both specializations are tangible measures taken to address the priority of collaborating across disciplines and program affiliations. This should make economics courses relevant to business administration students as some business courses have attracted economics students (under the Finance and Commodity Market Analysis specialization has done under M-ECON). Any specializations with appeal across business and economics make it more likely that the core courses under the specialization will have even broader appeal, e.g., core economics courses within specializations should have appeal for students in natural sciences but also in Noragric (International Environment and Development Studies). This should be the case for the joint specialization in Agribusiness and Food Economics where two economics courses have been brought back into being. The courses are expected to have appeal beyond the School.

At the program-specific level, the M-ECON program needs to address the paradox in the scores from student questionnaires and evaluations. The scores suggest that students are satisfied with their instruction, teaching methods, class-related activities, and evaluation. There was an improvement on the feedback given to them by the instructors and the program was considered inspiring. However, the overall satisfaction score is lower than any specific category. Moreover, the overall study environment scores above 4,0, but students' score for the social environment and academic environment scored at 3,5. A separate questionnaire suggested student commitment was low, that feedback by peers was weak, and that students struggled to see the relevance of the program to work life. What this seems to suggest is that the program council needs focus attention in two directions. First is to build up the moral of the candidates in the program, strengthening the cohesion of the group (first and second-year students) and improving the informal relations between students and the faculty. Second is to improve communication of the relevance of the knowledge imparted to the candidates for their working life.

Since 2018, the M-ECON program has implemented many measures related to improving the quality of the program. During the 2019-20 academic year, periodic meetings for study programs were introduced with the main aim of ensuring that the courses' learning objectives, and the teaching and learning activities and assessment methods remain relevant for the courses and the program's learning outcomes. The program council established an external advisory board to seek input from alumni and representatives from working life who can assess/evaluate the program's content and specializations. Meetings to discuss with student stakeholders and receive input from the external advisory board should contribute to the effort to improve how the learning objectives for each individual course contributes to realizing the programs' learning objectives, including making visible any elements of a multidisciplinary approach and to sustainability. The input and insights from the external advisory board should highlight the strengths of what the program offers and the relevance to the job market. The external advisory board serves as the link toward work life, provides an external check on the skills and knowledge that is imparted across the specializations, and can be a useful source of relevant internships or partnership arrangements to work on projects or propose research topic that can be relevant for a thesis.

Career day will continue to be used as a means of tapping into the experiences of our alumni and building the network of current students with persons from working life who have an understanding of how the skills and knowledge obtained at the School are relevant for the job market and working life. Given the physical-distancing requirements under the Covid-19-related restrictions we might need to find a solution to an alternative platform, such as video-taping former students and/or having them come to Ås to share their experiences in small groups or through a Zoom conference.

Because the academic cycle takes two years, it will only be possible to see preliminary results in the next year, especially as Covid-19 measures affected the last semester of the class entering in autumn 2018. Nevertheless, the programming changes in place for academic year 2020-21 are a commitment to the priorities of the faculty action plan.

Program-specific measures for the improvement of the learning environment require a priority to focus on measures that can improve the social cohesion and group dynamics of the economics class (first and second year students), and improving the students' understanding of how the knowledge and skills imparted to them reflect them for work life. The challenges of Covid-19-related restrictions will pose rethink on what was previously planned. Given that 50% of the class is made up of international students, contributing to a sense community among them will not be straightforward especially if the international students remain in their respective home countries.

Mentoring schemes for students have been pointed out by the Ministry of Education and Research as something that can improve learning and increase student completion rates. Involvement of student-peers in the mentoring schemes should be a means of developing comradery and social cohesion. The mentoring can take place in groups or as one-on-one sessions for students who want to get help/advice. These can be organized as a drop-in scheme or they can be regularly scheduled meetings, whether for a specific concern (e.g., thesis mentoring) or ad hoc problems that might arise.

Additional comments:

An important omission from the institutional mechanisms that have been enacted in recent years is an evaluation process related to the master's thesis. There should be a mechanism by which students can evaluate the supervision and advise they received for their thesis research and writing and the assessment process for the grade they receive. The School and the respective programs need to have some feedback and input into the quarter of the work a candidate must fulfill to complete the degree.